N&W to test 100-ton-capacity hopper for **integral-train** coal service . . . . . p. 14

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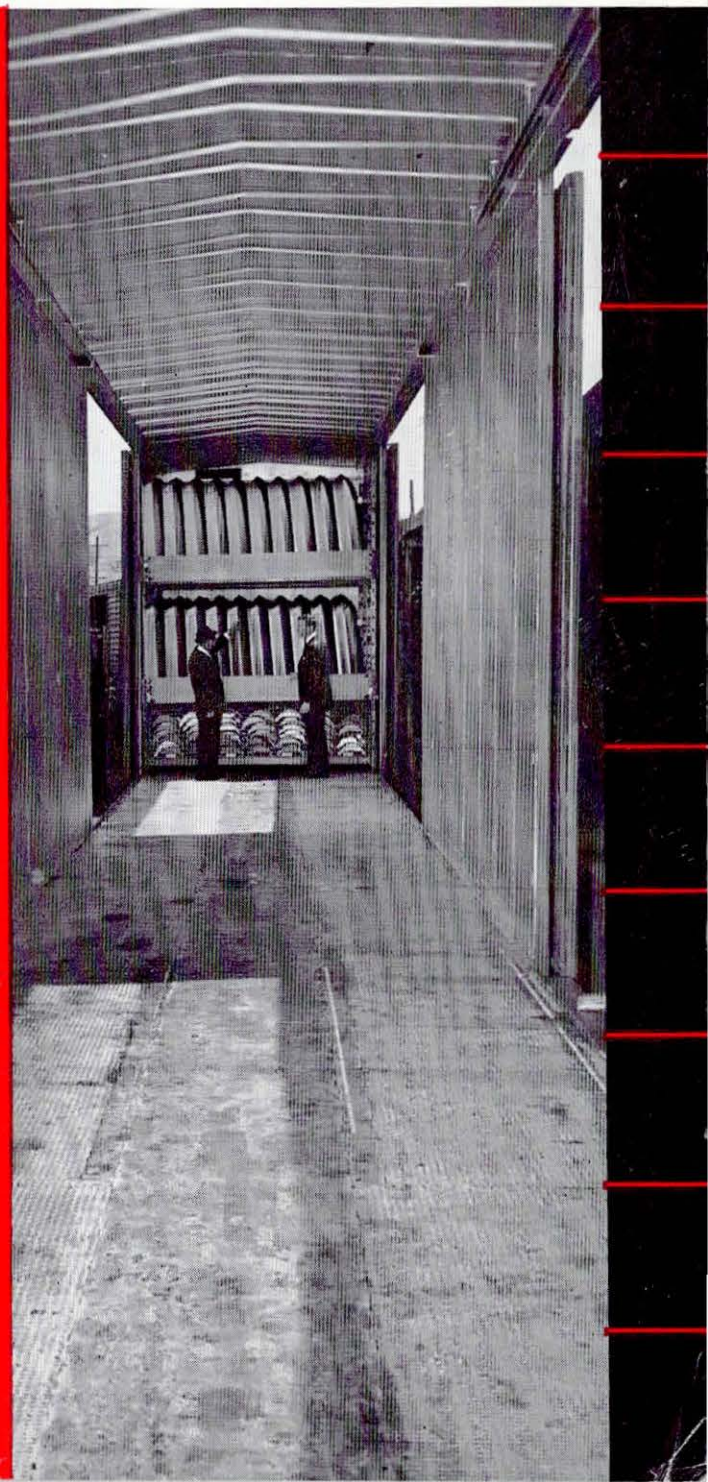
May 13, 1963

RAILWAY AGE WEEKLY

SP's NEW 'HY-CUBE' AUTO-PARTS CAR IS 94 FEET LONG

p. 12



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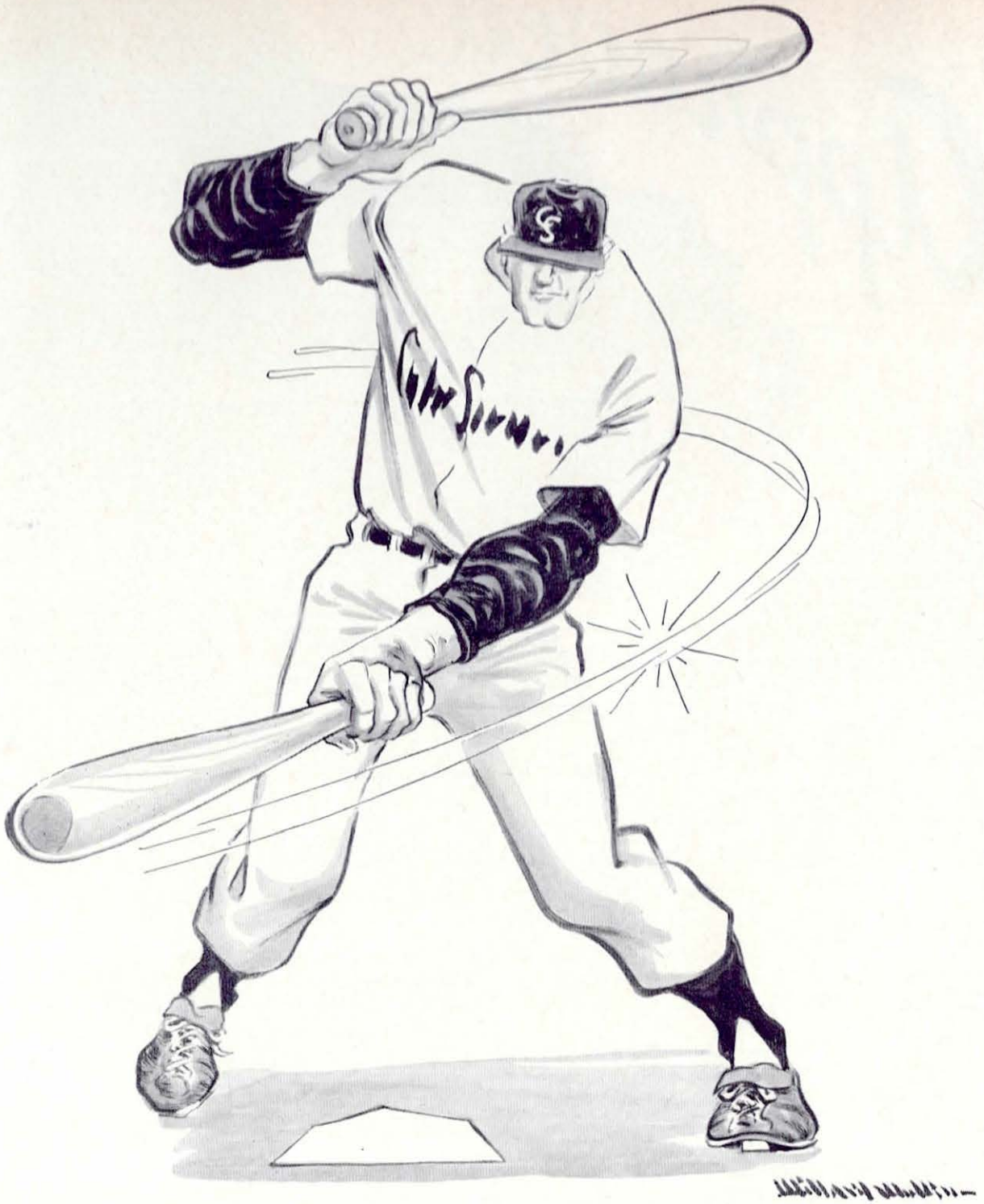

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RAILWAY AGE WEEK AT A GLANCE

May 13, 1963 • Vol. 154, No. 18

Cushioned cars called safe

Union contentions that the Hydroframe-60 car is unsafe are without foundation, an examiner has advised the ICC in a proceeding of broad implications p.9

NH can cut crew consist

The Connecticut PUC has ruled that the New Haven can remove one crewman from passenger trains operating in the state. Estimated savings: $350,000 a year.....p.11

New SP car is 94 feet long

Southern Pacific's 10,000-cubic-foot-capacity "Hy-Cube Hydra-Cushion," measuring 94 feet 8 inches from coupler to coupler, is designed for movement of auto parts.....p.12

For integral trains: 100-ton hopper car

Norfolk & Western's H-13, home-designed to exacting specifications, could become the prototype of cars that will make up tomorrow's integral coal trains.....p.14

Survey finds rail commuters happiest

Questionnaires distributed by a television network and analyzed by a psychologist indicate that Chicago's railroads have more satisfied customers than other commutation modes..p.18

Pole-type buildings shelter car painting

Treated poles are the main supports of two structures put up by the Wabash at Decatur, Ill., for sandblasting and painting operations p.19

Wheels and axles: problems, solutions

The first International Wheel Sets Congress, held in Italy, covered a wide range of wheel problems. Here's a first-hand report by an American engineer who was present.....p.26

Per diem change set for Jan. 1, 1964

A control center in the AAR Operating-Transportation Division will administer a new multi-level per diem rental system reflecting car values p.38

PRESTRESSED RAILWAY BRIDGES COME OF AGE

The Chicago, Burlington and Quincy began operating trains over the nation's first prestressed concrete railway bridge in 1954. In the next 8 years, 20 more railroads placed prestressed bridges or trestles in service. Many more are in the planning and construction stages.

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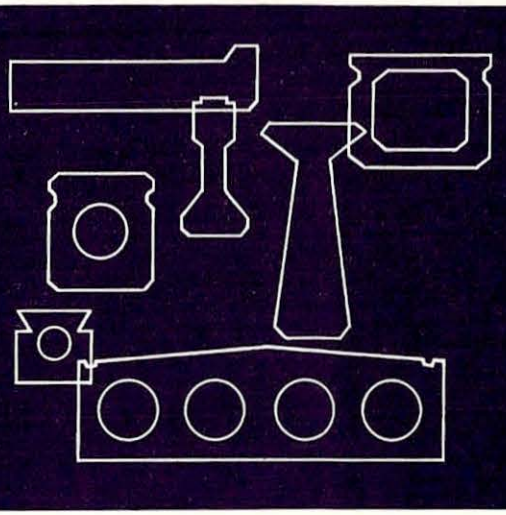

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RAILWAY AGE WEEK AT A GLANCE

The Action Page—Let's get a bigger pie

Instead of trying to increase the size of the pie the railroads have to divide, some unionists appear to be trying to shrink its dimensions p.42

Short and Significant

Emergency Board 154's work-rules report...

was taking shape late last week after the panel's efforts to mediate the dispute apparently ended in failure. The report was due at the White House May 11.

B&O-Reading studies...

that could lead to "merger, lease, or greater stock ownership [of Reading by B&O]" were disclosed last week. B&O now has a beneficial ownership of 42% of Reading stock.

Auto-rack pioneer Whitehead & Kales...

is going into the freight-car construction business, with an eye on both domestic and export markets. The Detroit-based firm already has its first domestic order (see p. 35).

The 108-mile coal-slurry pipeline...

operated by Consolidation Coal Co. in Ohio will be closed in the wake of rail rate cuts on coal—but Consolidation still hopes to build a pipeline from West Virginia to New York.

Decline in railroad passenger business...

continued in 1962, according to just-released ICC figures. Decreases were registered in the number of revenue passengers (1.5%), passenger-miles (1.8%), passenger revenues (0.9%).

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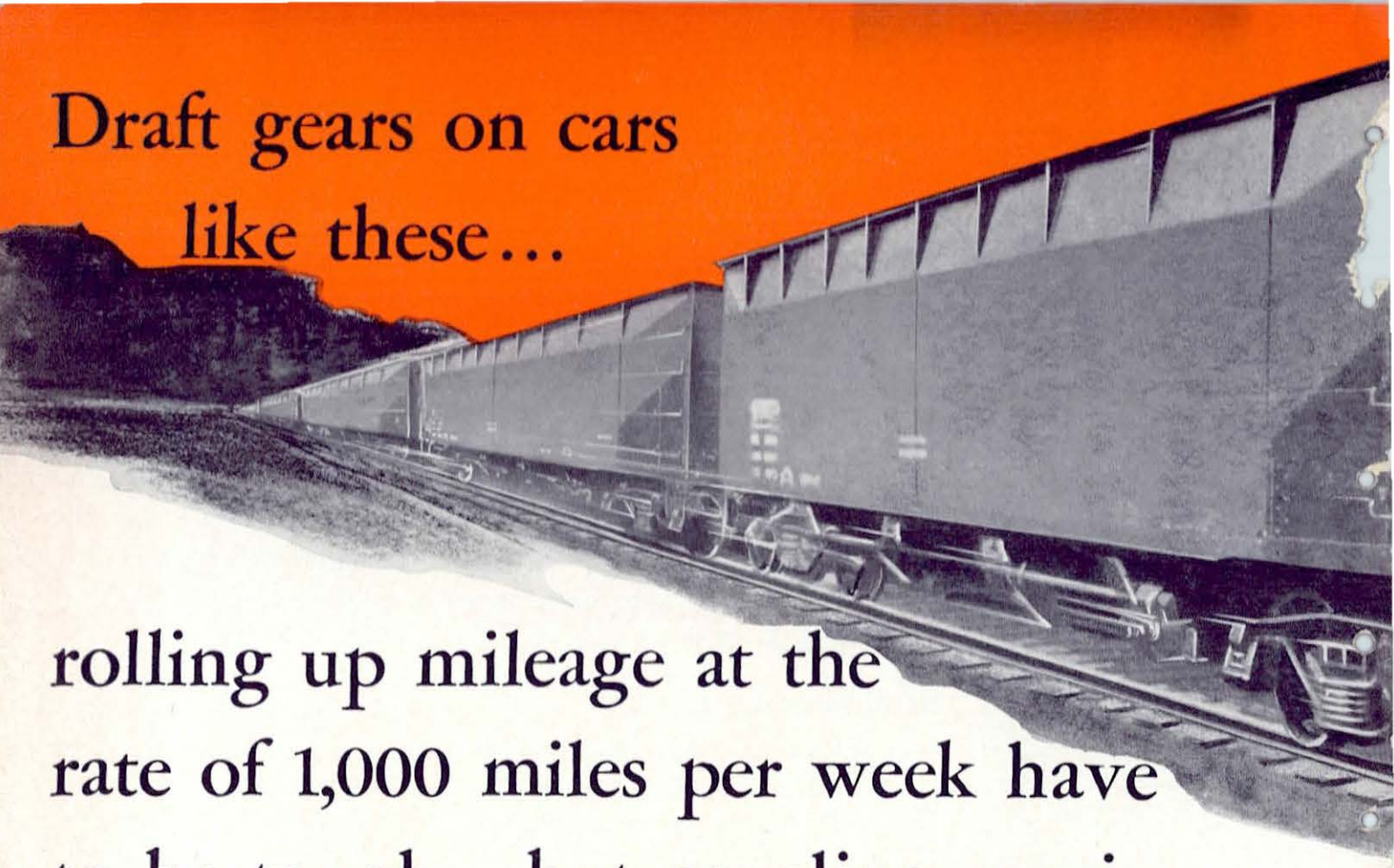
Current Statistics

Operating revenues		**Carloadings revenue freight**	
12 mos., 1962	$9,439,894,771	18 wks., 1963	9,431,858
12 mos., 1961	9,187,122,899	18 wks., 1962	9,739,373
Operating expenses		**Freight cars on order**	
12 mos, 1962	7,418,555,063	April 1, 1963	21,307
12 mos., 1961	7,271,159,800	April 1, 1962	15,264
Taxes		**Freight cars delivered**	
12 mos., 1962	905,083,609	3 mos., 1963	9,545
12 mos., 1961	991,555,905	3 mos., 1962	8,895
Net railway operating income		**Serviceable cars**	
12 mos., 1962	725,645,679	April 1, 1963	1,414,166
12 mos., 1961	537,694,880	April 1, 1962	1,461,833
Net income estimated		**Cars awaiting repairs**	
12 mos., 1962	574,000,000	April 1, 1963	128,690
12 mos, 1961	384,000,000	April 1, 1962	136,151

Draft gears on cars like these...



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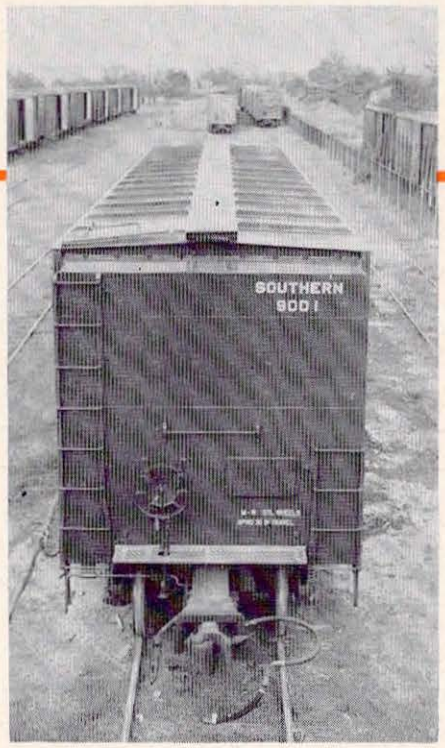
Cushioned Cars Called Safe

An examiner has advised the ICC to reject a union contention that the Hydroframe-60 car is unsafe. The proceeding could have broad implications for other cushioned cars in service.



SOUTHERN, a pioneer user of sliding sills with very long travel, praises "superior protection of ladings," is convinced cars are safer for its employees, says ICC Examiner Boyd.

The ICC has received from Examiner Robert R. Boyd a proposed report recommending a Commission finding that the Hydroframe-60 freight car, built by Pullman-Standard and in service on several railroads, is not in violation of the Safety Appliance acts or standards, "or of any other law, rule or regulation." From such a finding, the examiner also recommends that the Commission follow through and deny the petition assailing the car which was filed by unions representing railroad employees.

Meanwhile, the proposed report does take note of the fact that the rule with respect to safety appliances on new-type cars has been in effect since 1911. In that connection, Examiner Boyd goes on to express his agreement with the unions' suggestion that it may be time for a change. Accordingly, he recommends that the unions, or any other interested parties, file a petition asking the Commission to institute a rule-making proceeding "for the purpose of bringing the 1911 standards up to date and for the further purpose of supplementing them in any respects in which experience has indicated them to be inadequate."

While the present proceeding involves the Hydroframe-60 car, any adverse ruling could affect other cars with hydraulically-cushioned sliding sills.

● **Three unions involved.** Petitioners still active in the present case (No. 33746) are the Brotherhood of Railroad Trainmen, Order of Railway Conductors & Brakemen, and Switchmen's Union of North America.

The petition, filed April 27, 1961, resulted in the investigation out of which Examiner Boyd's report has come. Meanwhile the Commission denied that plea of the petition which sought an immediate order prohibiting use of Hydroframe-60 cars. Among other allegations, the petition charges violations of coupler, grab-iron and end-of-running-board rules.

Hydroframe-60 is a cushioned underframe car, and differences between it and the conventional box car stem basically from its different underframe construction. In contrast to the conventional car's rigid center-sill construction, Hydroframe-60 has a sliding center sill giving 30 inches of cushioned sill travel in either direction. This dissipates the force of impacts and thus reduces damage to lading.

● **Safety question.** Generally, the petitioning unions contend that various features of the design, especially the greater-than-conventional distance between cars coupled together, make Hydroframe-60 unsafe. In addition to his recommendation that there was no violation of the safety laws or regulations, Examiner Boyd also advises the Commission that Hydroframe-60 "is not shown to be an unsafe or undesirable car in any other respect sufficient to justify any action or recommendation unfavorable to the car."

Considerable attention is given in the proposed report to the alleged violation of the end-of-running-board rule. There the examiner points out that an interpretation of that rule, which might well be relied on to clear Hydroframe-60, was issued by the Commission's Bureau of Safety in 1940 to clear such cars as those equipped with Duryea underframes.

"This," the proposed report says, "was a crucial turning point in the development of extended-center-sill cars, and the ruling in effect abandoned the previous intent of the requirement aimed at keeping the ends of adjacent running boards within easy stepping distance apart. Therefore, we have here the situation where the petitioners, on the one hand, insist that longitudinal running boards should be within stepping distance apart, but, on the other hand, a well-intended Bureau ruling in unchallenged existence, until now, for over 20 years to the effect that there is no limitation upon the maximum distance between the ends of longitudinal running boards."

● **1911 standards.** When he came to his determination that the end-of-running-board rule should not bar clearance of Hydroframe-60 as safe, however, Examiner Boyd did not rely on the challenged Bureau ruling. He found the clearance in line with the "real intent and true scope of the 1911 standards." His reading of the record on which those standards are based convinced him that the Commission "fully intended to encourage flexibility for growth in the industry and among car makers . . . and to avoid inserting anything in the standards which would de-

WATCHING WASHINGTON WITH WALTER TAFT

TAFT

• **TRUCKER CONTENTIONS** that many railroad rates fail to cover out-of-pocket costs are based on an ICC staff study which the railroads are assailing as a producer of "meaningless cost figures." The study is the so-called Burden Study, entitled Distribution of the Rail Revenue Contribution by Commodity Groups. It is issued annually by the Commission's Bureau of Accounts with a disclaimer announcing that it has not been adopted by the Commission. The latest edition, based on 1960 data, is Statement No. 2-62. The assistant managing director of American Trucking Associations, William A. Bresnahan, used some figures from it when he appeared recently before the House Committee on Interstate and Foreign Commerce to fight proposed legislation which would implement President Kennedy's call for the elimination of minimum-rate regulation from the transportation of commodities in bulk and agricultural products.

THE COMMITTEE'S CHAIRMAN, Representative Oren Harris (D. Ark.), asked for specific examples when Mr. Bresnahan charged that railroad rates on bulk and agricultural commodities "already are the most depressed rates in the railroad rate structure, frequently yielding less than out-of-pocket cost." The ATA executive replied with figures from the Burden Study.

THE LATEST EDITION of the study does list about 100 "deficit" commodities, i.e., those as to which the study shows that revenues failed to equal out-of-pocket costs. Its overall showing by carload commodity groups, however, is that out-of-pocket costs were more than covered in each group (RA, June 25, 1962, p. 10).

THE RAILROADS' ATTACK on the Burden Study is in the record of the case (No. 34013) wherein the Commission proposes to give the study status as *prima facie* cost evidence in competitive-rate cases. Like status is also proposed for several other Commission-staff studies, including the Form A territorial average cost studies.

THE RAILROAD PLEADING opposes the whole proposal, but it gives special attention to the Burden Study. The "confusion and invalid contentions generated" by publication of that study is called a good illustration of the danger inherent in attaching *prima facie* standing to cost figures provided by application of a formula.

DETAILED CRITICISM of the study follows, including characterizations of it as "inconsistent" with the cost studies, a "statistical exercise," a propounder of beliefs for which "no foundation" is cited, and a "publication predicated on false and erroneous assumptions." The railroads also suggest that, although the study takes a sound position that fully-distributed costs have no valid economic meaning with reference to the determination of minimum rates, it becomes a "strange spectacle" for having done so after presenting data on the ratio of revenues to fully-distributed costs.

THESE DATA indicate that adherence to the full-cost basis of rate-making would require increases averaging 25% on commodities in the Products of Mines group, 8.7% on Products of Forests, 5.3% on Products of Agriculture, and 4.2% on Animals and Products. On the same basis, products in the Manufactures and Miscellaneous and Forwarder Traffic groups would get rate cuts of 20% and 6.5%, respectively.

ter progress or discourage new ideas or inventions." Noting next that "there was even some discussion of rail-car invention then in process, which would be affected by some of the proposals," the proposed report adds:

• **Affirmative approach.** "The whole purpose of the standards was affirmative in nature designed to prescribe minimum, uniform, and standardized safety appliances. The approach, being affirmative, and not negative, was to adopt standards suitable for all situations, within reason, and it was nowhere remotely contemplated that a negative approach should be used so as to negate the development and use of an improved car. In other words, it is clear that had the Hydroframe-60 car then been envisioned, an approach designed to that car would have been used. Not envisioning that car, they issued no end-of-running-board rule intended for it.

"That the running board problem was not overriding is apparent from the number of standards laid down for various types of cars having no running board and requiring none. When it was impossible from the inherent design of the car to require a running board, much less to lay down requirements with respect thereto, none was required and the running board situation then was not even pressed as a problem. In no instance was a particular type of car disfavored, or ordered for modification to fit the generally-envisioned requirements; instead, in each situation the appliances were adjusted to meet the particular type of car presented. This was the whole approach.

• **Car is 'essential.'** "The same situation applies to a significant extent here, as here we have a car obviously essential, now, in the industry, and inherently it could not be constructed to meet the literal requirements of 1911. The ultimate answer, then, is that having never intended to preclude the development of the Hydroframe-60 car, and having never intended the involved requirement to apply to such car, the requirement has no validity, *ab initio*, except as to non-extended sill cars which were then in the contemplation of the Commission. In other words, the end-of-running-board rule has no validity as to the car here under consideration."

Meanwhile, the examiner had reviewed the evidence of interested railroads indicating that it is unnecessary for trainmen to walk on the tops of trains. Among such railroads is the Southern, identified as a road which played a leading role, with Pullman-Standard, "in developing the 30-inch travel cushioned underframe car." Southern has a "no-topping" rule which is "rigidly enforced."

NH Gets Court's OK To Cut Crew Consist

Even though the BRT may continue to appeal, the railroad can implement a Connecticut commission ruling allowing it to operate with one less crewman on passenger trains in the state.

The New Haven has won the right to reduce the size of crews on passenger trains operating in Connecticut—even though a court fight over the plan may drag on for more weeks or months.

In effect, the ruling—obtained from Judge H. S. MacDonald in state Superior Court—will permit the road to make a one-man-per-crew cut (though a New Haven spokesman said no reductions will be made where the additional man is actually needed as a ticket collector). About 30 jobs will be affected, but the road said most of the men whose jobs are eliminated should be able to catch on in other assignments, through attrition in the ranks of the trainmen.

● **Appeal to PUC.** New Haven's proposal started out last year as an appeal to the Public Utilities Commission for modification of a 1914 regulation specifying crew consists. The road noted that the order required it to use more men than were required in either New York or Massachusetts, and that savings of about $350,000 per year could be realized if the order were changed.

Over the protests of the Brotherhood of Railroad Trainmen, the PUC granted New Haven's request. The union appealed to the state courts, but the railroad's position was again upheld. Then, with a BRT appeal to the Supreme Court in the offing, New Haven petitioned for permission to put the crew-consist change into effect, and charged that a further union court suit would be for purposes of delay.

Judge MacDonald's ruling permits the cuts to be made, but does not bar the union from continuing the fight (and, in the event of an eventual BRT victory, the jobs would likely have to be restored).

● **BRT may continue fight.** The brotherhood's reaction: An appeal to the state Supreme Court may be filed. Meanwhile, the union may seek a restraining order to prevent New Haven from making the cuts pending the outcome of Emergency Board 154's study of work rules. In effect, BRT would be asking the court to put New Haven under the same restraint applied to the union when a federal judge enjoined the BRT from striking Santa Fe over a rules dispute (RA, May 6, p. 48).

Union sources indicated such a move might be made, in view of the ruling handed down recently in Chicago—in which Santa Fe was upheld in its claim that a Trainmen's strike would be in violation of Section 10 of the Railway Labor Act (which requires both sides to a dispute to maintain status quo while an emergency board is in session and for 30 days after its report is issued).

● **Rules at issue.** The BRT-Santa Fe controversy involves 68 unresolved demands (out of almost 200 which the brotherhood served seven years ago), dealing with work rules similar to those now at issue before Emergency Board 154 in the national rules dispute.

Apparently, the union may take the position that the New Haven's proposed move—dealing as it does with a change in consist of crews—also falls within the scope of the Board 154 investigation.

As of late last week, however, neither the BRT Grand Lodge office in Cleveland nor Trainmen's President Charles Luna (in New York for the emergency-board hearings) could confirm that the union would try to block bankrupt NH's crew changes by court action, at least until Presidential Emergency Board 154's time is up.

Containerization Benefits Are Big—But So Are the Problems

Containerization holds promise of reduced transportation costs for shippers and increased revenues for carriers—but, warns one expert in the field, "establishing an efficient container service is no 'bed of roses.'"

The containerization picture — in both its bright and cloudy aspects—was depicted by Robert J. Franco, director of the business development division of REA Express, at the recent AMA National Packaging Conference.

Although carriers and shippers stand to benefit from containerization, Mr. Franco said, the consignee is actually in the best position to reap the benefits of an improved packaging operation. He said "a great many of the benefits accruing to the shipper and the carrier have a compounding effect on the consignee. . . . It is the receiver who in effect benefits most since he is the recipient of an improved over-all service." Among the residual benefits:

- Reduction of loss and damage.
- Reduction of split-lots.
- Shorter delivery time due to faster handling.
- Less handling space and related cost savings.

Described as independent benefits for the consignee were:

- Reduction of unloading costs. Shipments can be transferred directly from the dock as a unit to the warehouse before breaking bulk.
- Flexibility in warehouse operation. Because many pieces can be handled as a unit, a portion of unloading time normally required immediately can be eliminated. During peak warehouse periods, containerized shipments can be set aside until a more convenient time for checking and sorting.
- Reduction of transportation costs. An obvious benefit on collect shipments and a possible indirect benefit through reduced purchase price.

● **The cloudy side.** Problems of the carriers cited by Mr. Franco included the "many sizes and shapes of containers, the equipment necesssary to handle them, and the oldest problem of all—the return of the empty container." Standardization will relieve the first problem, he said, and "experience and time" will enable carriers to have equipment available. Solutions offered for the problem of the return of the empty containers were disposable one-way containers, low rates on collapsible containers for return moves, and free return of empty containers.

REA, Mr. Franco said, moves the containers to their destination and "from there under load to other destination cities, not necessarily even in the same direction as their origin city. In some cases, the containers are loaded with revenue freight and moved to a city needing containers for outbound loading."

'HY-CUBE HYDRA-CUSHION CAR'

New SP Car Is 94 Feet Long

The car, designed by SP's mechanical engineers and General Motors' material handling specialists, features four sets of double plug doors and new-type movable aluminum bulkheads.

The Southern Pacific's entry in the high-capacity freight-car field is now in active service. The entry is almost twice as long as the average box car. It measures 94 feet 8 inches from coupler to coupler and 17 feet above the top of the rail.

The 10,000-cubic-foot-capacity unit —called a "Hy-Cube Hydra-Cushion" car—was designed especially for bulk movement of fragile auto parts. The car's initial test trip was completed on April 15, without special handling, when it delivered miscellaneous racked auto parts to the General Motors Corp.'s Melrose plant in Oakland, Cal. Unloading of the initial shipment was done by fork lift in about 40 minutes.

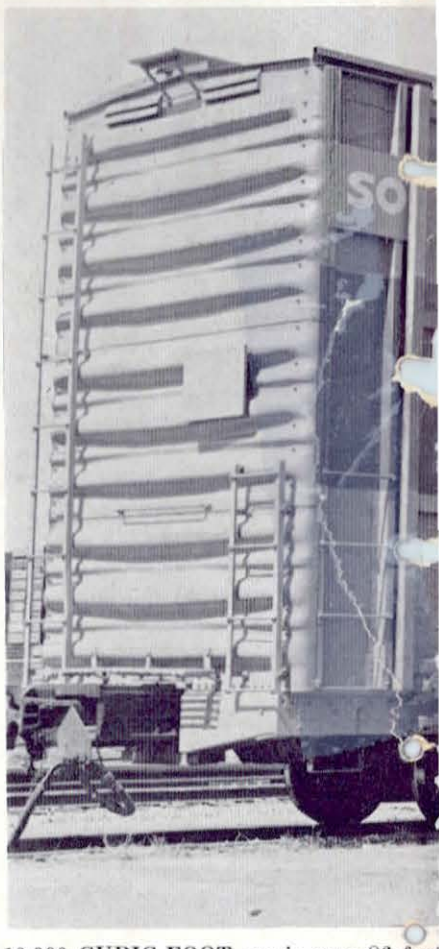
BIG AUTO PARTS CAR is inspected by (left to right) William M. Jaekle, assistant vice president—system operations, Southern Pacific; Robert Jones, assistant traffic manager, General Motors; William G. Peoples, vice president, system freight traffic, SP; D. F. Diemer, assistant general freight and passenger agent, SP; T. A. Fante, manager, specialized operations, SP, and John C. Daugherty, material superintendent, General Motors.

The shipment, loaded on April 9 in Detroit, Mich., was reported to be in perfect order on arrival. Impact recording instruments placed at intervals throughout the load indicated that the lading had received no significant shocks in transit.

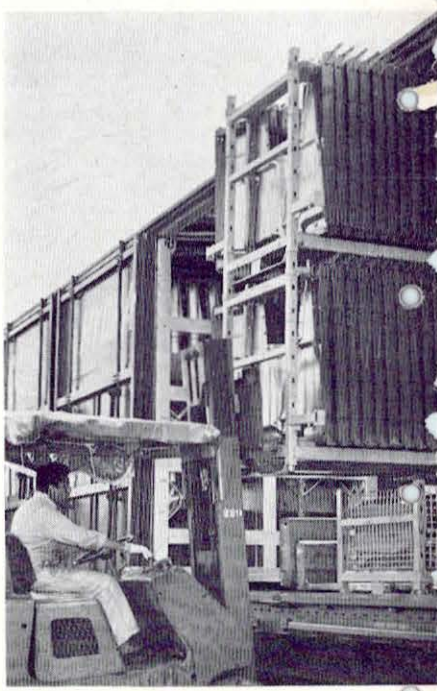
"This car represents another breakthrough in Southern Pacific's efforts to cut shipper costs through research and development of efficient and new transportation tools," says W. G. Peoples, SP's vice president of system freight traffic. "It was designed by SP's mechanical engineers and General Motors' material handling specialists in an effort to come up with a new car capable of handling high capacity while protecting fragile auto components."

The car features four sets of double plug doors, 10 feet wide by 12½ feet high, which provide two 20-foot openings to a side. It contains new-type movable aluminum bulkheads which lock in place individual racks loaded with variously shaped automobile parts. Additional load protection is provided by the 20-inch-travel Hydra-Cushion underframe. The car, internally, is 86 feet 5 inches long, 9 feet 2 inches wide, and 12 feet 8 inches high. Its roller-bearing trucks are equipped with 33-inch wheels and truck-mounted brakes with composition shoes.

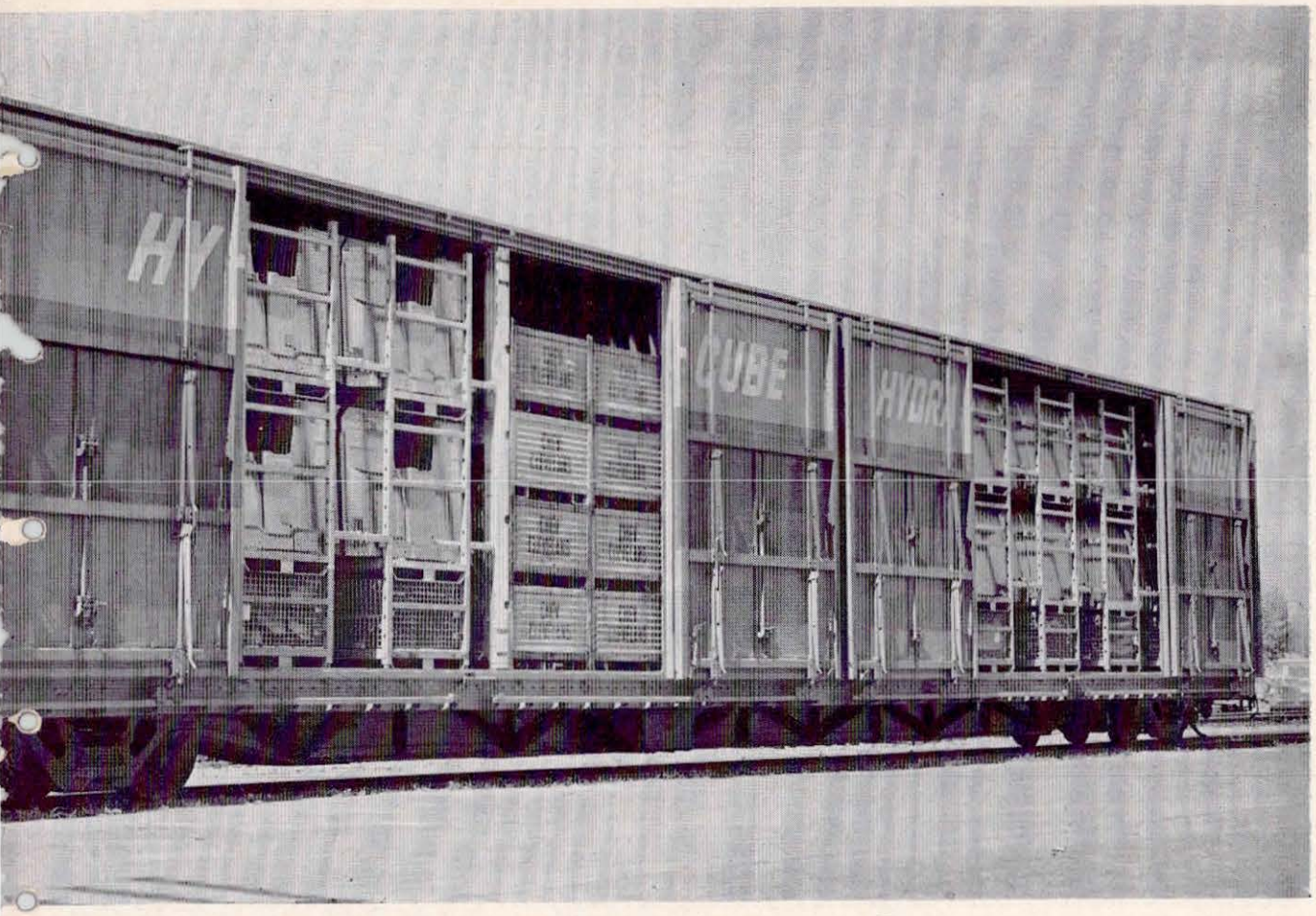
The "Hy-Cube Hydra-Cushion" car is believed to be only the second type of 10,000-cubic-foot capacity box car in service today. The first car of that type was the Southern's "Big Boy." That car, designed by the Southern and built in the road's shops (RA, Dec. 18/25, 1961, p. 35), was initially used for transporting bulk tobacco. A recent "Big Boy" shipment of 104 sets of bedroom furniture (600 shipping packages) from Lenoir, N.C., to Chicago, was described by the Southern as the "biggest single box car load of furniture in history."



10,000 CUBIC-FOOT car is over 86 feet

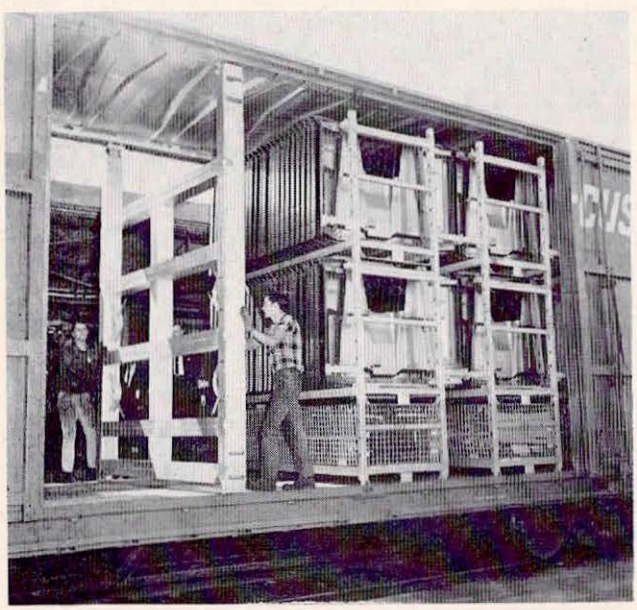


LIFT-TRUCK LOADING was completed in 40 minutes.



long inside and 94 feet over couplers; has four 10-foot-wide plug doors per side.

Car Loads Fast, Protects Automobile Components



MOVABLE ALUMINUM BULKHEADS lock individual racks loaded with parts of many shapes into place.

AUTOMOBILE PARTS ready for loading into the experimental car, almost twice average box-car length.

For Integral Trains: 100-Ton Hopper Car

Norfolk & Western's answer to the challenge of coal pipelines and mine-mouth power plants may be this 3,429-cubic-foot-capacity car, home-designed to a series of exacting specifications.

The Norfolk & Western, which has the nation's largest fleet of 85-ton open-top hopper cars, may be building them even larger before long. The road has just completed a prototype 100-ton hopper car which is to be subjected to an extensive test program before any decision will be made about the car's future.

The 63,000-pound, 3,429-cubic-foot car, designated by the N&W as its Class H-13, represents the fourth major open-top-car design produced by the road's mechanical department in the past six years. These half dozen years have been marked by great changes in coal transportation, and the H-13 car indicates there are changes still to come.

"Although railroads haul about 75% of the U.S. coal to market," says N&W's 1962 annual report, "new alternatives to rail transportation—chiefly coal pipelines and mine-mouth electric generating plants—are being actively advocated." In response to these challenges, N&W is working with coal producers and consumers to establish a variety of volume rates, with adjustments tailored to meet specific competitive factors.

These volume rates, the report continues, "are made to attract large tonnages, moving at regular intervals. This allows the N&W to utilize to the advantage of coal shippers and receivers its inherent economies in mass transportation. Volume rate structures also reflect the improved efficiency of the N&W through technological advances, effective cost control, and innovations in operating techniques."

During 1962, the N&W operated a series of "unitized" trains for delivery of coal from Roanoke, Va., to the New York Harbor area (RA, Sept. 3, 1962, p. 10). These demonstrated "that the unit trains could make the round trip of nearly 1,000 miles in approximately 48 hours." This was accomplished by eliminating much yarding and shifting, handling the entire train as a single unit through weighing and dispatching procedures, and scheduling train movements without stops, except for crew and motive-power changes. The trains, the report concludes, "are forerunners of future 'integral' trains of high-capacity, semi-permanently-coupled cars operating on shuttle schedules between coal-producing areas and large-volume consumers."

The H-13 may well be the prototype of the cars that will make up these trains. Almost a year ago the N&W mechanical department was given the assignment of producing a car that would carry 100 tons and that could be handled at such existing facilities as car dumpers. By late last year the design was completed, and material for the experimental car was ordered. It was completed by the N&W's Roanoke shop a few weeks ago and is to undergo several months of road service.

In 1958 the N&W, in cooperation with the Chesapeake & Ohio and the Pennsylvania, designed a 70-ton hopper car (RA, Aug. 25, 1958, p. 11) which subsequently was adopted as an alternate standard (in 1960) by the AAR Mechanical Division. An 85-ton hopper, an elongated version of the standardized 70-ton car, which the N&W had designated as its Class H-11, has the same plate thicknesses and structural sections. Both cars are characterized by their outside side stakes and by the double slope of their hopper floors. Although the 70-ton design has been built by other roads, the N&W constructed only a single car of this type. It then switched to the 85-ton H-11 and has since ordered 6,500.

The 100-ton Class H-13 is no longer than the 85-ton H-11 so the height of sides has been increased by two feet to produce the larger cubic capacity. The transverse hopper-door openings have been arranged to produce a maximum of area for lading discharge, meaning that the conventional single-door hoppers have been discarded in favor of a double-door design and that the three-hopper arrangement has become a four-hopper arrangement in the new car. Hopper openings are spaced on 6 foot 9½ inch centers. Bottoms of the hopper doors are 18¾ inches above the rail.

The car has a conventional center sill arrangement with this structural member topped by longitudinal hoods across the hopper openings.

Each body bolster is formed of a one-quarter-inch web plate reinforced by six vertical four-inch I-beams extending between a one-half-inch bottom cover plate and a specially formed eight by four by one-half-inch angle at the top which extends across the car between the bolster side posts and carries the six floor support beams which run from the top end angle to angle atop the center sill. The three cross-bearers are 14-inch wide-flange beams with top flanges shaped to support the crossridges welded on their tops.

NEW DESIGNS INCREASE CAPACITY

	H-10 70-TON	H-12* 70-TON	H-11 85-TON	H-13 100-TON
First built	1957	1958	1960	1963
No. in service or ordered	8,000	1	6,500	1
Cubic capacity, level full	2,460	2,603	2,868	3,429
Length, ft-in.:				
Inside	36- 9¾	39-10	45- 0	44-10¼
Over strikers	38- 2	40-11½	46- 0½	46- 0½
Coupled	40- 8	43- 6	48- 8½	48- 8½
Width,ft-in.:				
Inside	9-10	9- 9½	9- 9½	9- 9½
Overall	10- 7¼	10- 6¾	10½- 6⅝	10- 7⅛
Height, ft-in.:				
Over sides	11- 0	11- 0	11- 0	13- 0
Over ends	12- 3	12- 1¼	12- 3	13- 0
Light weight, lb.	52,600	54,100	61,100	63,000
Load limit, lb.	167,400	165,900	178,900	200,000

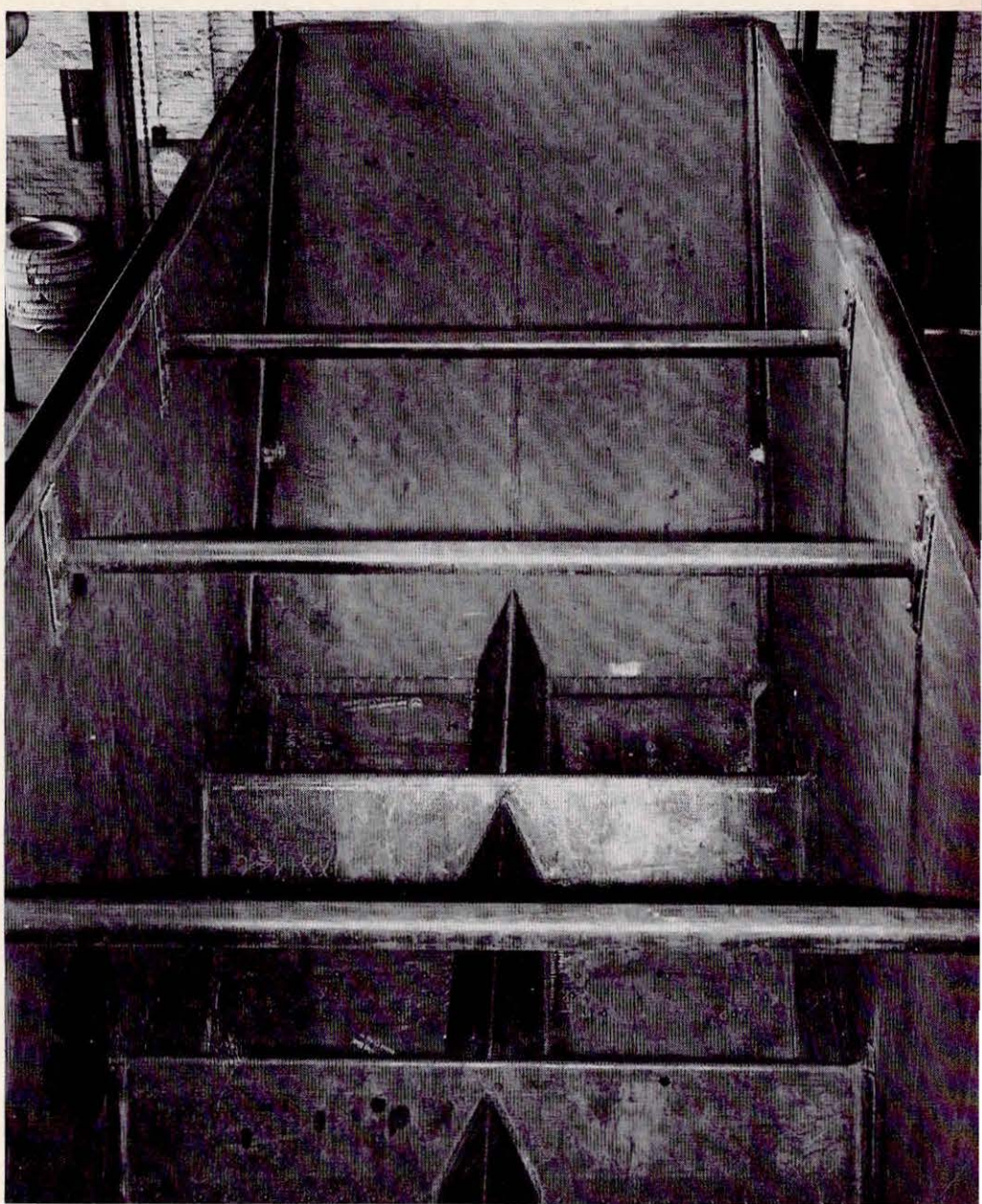
*AAR Alternate Standard Car

HIGH-CAPACITY car's assembly involves a combination of welded and riveted construction. Rapid unloading is assured by steep angles of sloping floors and cross ridges (below). Floors are fabricated of stainless steel.

The slope floor surfaces of the car are ⅛-in. stainless steel which has been found to be so smooth that lading will not hang up, making possible the rapid unloading which integral-train operation envisages. Sides of the car are 3/16-inch low-alloy, high-tensile steel, and the hopper sides are 5/16-inch LAHT material. The side angle is a 5- x 3½- x ⅜-in. angle, and the top chord is a bulb angle of the same dimensions. The twelve intermediate posts on each side of the car are pressed hat sections, four and one-half inches deep. Side posts at bolsters and crossbearers are heavier sections of the same configuration. The entire car side is welded, but is attached to the side angle with rivets as well as welds, as the case with the bolster and crossbearer to side-post connections. The N&W has consistently relied on a combination of welding and riveted construction in its open-top cars to combat the effects of car shakers. This was based on a comprehensive test program conducted by the railroad several years ago.

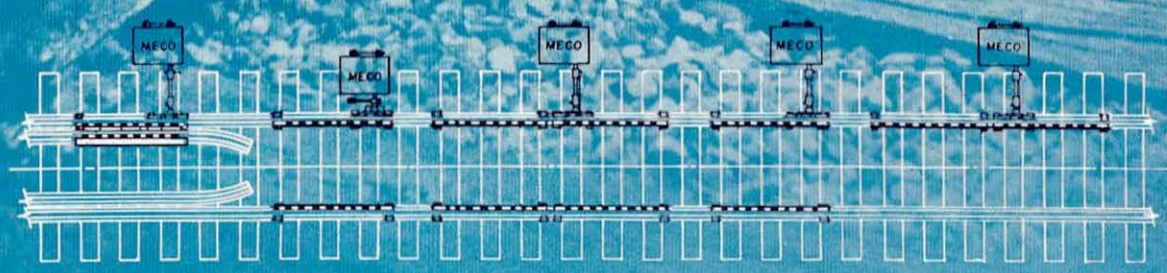
The sides are tied together with three tubular ties, located above the crossbearers and centered 13¾ inches below the top of the car side.

The car has conventional 100-ton trucks with 6½- x 12-inch roller bearings, 2½-inch-travel springs, and 36-inch multiple-wear steel wheels. The light weight of the car, 63,000 pounds, is such that no empty-load brake is required. However, the car is fitted with truck-mounted package brake assemblies.



MECO RAIL & FLANGE LUBRICATORS

MC MECO LUBRICATORS



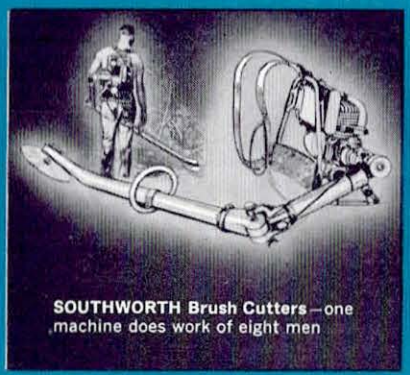
GUARD RAIL TYPE

YARD TYPE

DOUBLE BAR TWO RAIL TYPE

STANDARD TWO RAIL TYPE

STANDARD SINGLE RAIL TYPE



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Survey Finds Rail Commuters Happiest

Chicago's suburban railroads have more satisfied customers than other commutation modes, according to a new survey. Trains scored on speed, comfort and reliability. Least popular: buses.

Chicago railroad commuters generally are happy with the service and facilities provided them, and many commuters who don't use the train would like to, according to a survey by CBS Television.

Questionnaires were distributed to commuters and the answers were analyzed by Dr. Gary Steiner, psychology professor at the University of Chicago, for a CBS experiment in viewer participation.

The survey showed that 88% of the Burlington and Chicago & North Western commuters and 74% of Illinois Central commuters prefer to ride by train. But only 41% of those who drive, 34% of those who use the Chicago Transit Authority's elevated and subway facilities, and 20% of those who use the CTA bus prefer the mode of transportation they are using.

• **Enjoyment rating.** The percentage of commuters who said they actually enjoy their daily ride ranges from 38-82 on the railroads—but only 5-65 for other modes. Nearly 40% of the car drivers and nearly a third of the CTA's patrons said they prefer to use the train.

The main advantage of taking the train, according to rail commuters, is its speed. Comfort rated high on the Burlington and the North Western, and reliability on the IC and the Burlington. Biggest complaint about the trains was "not enough trains." Inconvenience —usually the location of stations—was cited by Burlington and North Western patrons, but by only 7% of the IC's passengers. Comfort and relaxation ratings for the IC were lower than for the other roads, but apparently the IC's score would soar with just one addition—air-conditioning. Like the patrons of the other two roads, IC passengers also would like summer relief.

Significant in the answers, said Dr. Steiner, is that 17% of the Burlington's riders and 11% of the C&NW's wrote "nothing needs improving."

• **Portrait of the commuter.** The Burlington passenger, Dr. Steiner said, "tends to be the youngest commuter that we find on railroads; the average age is 40. About half the commuters are executive and professional men . . . 80% of the Burlington commuters are male . . . a good many of them (64%) told us that the availability of commuter service was the major factor in their selection of a residence."

North Western riders, he said, "are closer to the stereotyped image of a suburban commuter. Most of them . . . far more than any of the other two lines, are in communication service, advertising, television, etc."

The main advantages of taking CTA transportation, passengers said, are convenience and economy. Only 4% of the bus riders thought speed and comfort were advantages of the CTA; 20% of 'L' and subway riders thought speed an advantage, 3% thought comfort and advantage.

• **The young drive.** "In the executive and professional groups," Dr. Steiner said, "people tend to drive at earlier ages, and when they get to a certain age the advantages of the commuter railroad apparently become a little more clear to them . . . a very high figure, 39%, say they really prefer going on the train . . . only 14% think driving's economical . . . what they like is convenience and speed. Comfort is not a very important category. They need their car during the day in some instances . . . A quarter of our drivers told us what they would most like to see changed or improved is more or better public transportation."

The composite picture, Dr. Steiner said, indicates that "people are driving frequently because they have to and not because they want to." People who drive every day he said, "tend not to enjoy it and they find it frustrating most of the time." They drive, he said, because they live too far from the station, need their car on the job, or work irregular or late hours.

• **Staggered hours?** The primary commuting problem, according to Dr. Steiner, is too many people using transportation at the same time. He suggested the "staggered hours solution," and noted that in each commuting group at least 30% said they would prefer to come to work an hour earlier and go home an hour earlier.

His conclusion:

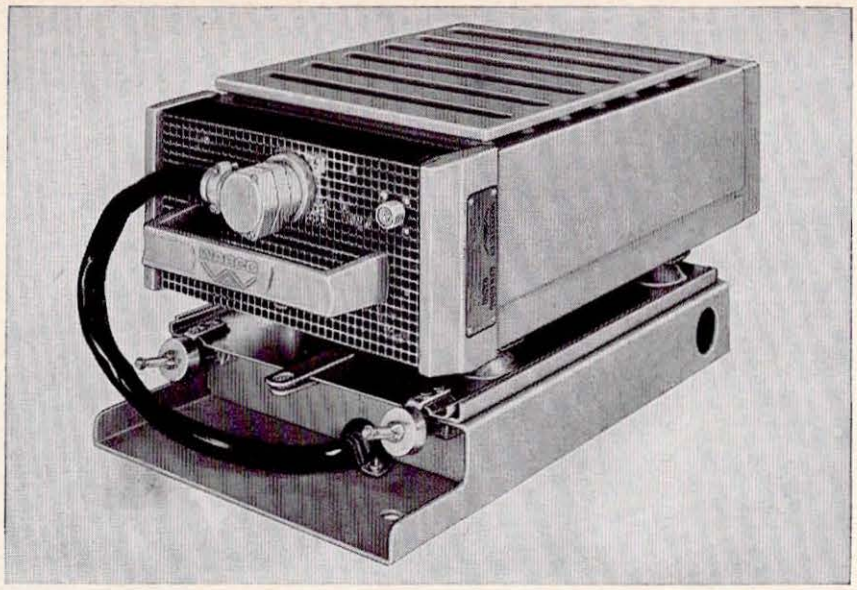
"All in all, we are going to say that the railroad commuter is by far the happiest commuter and if everyone felt the way he did, I do not think we could say that we have a commuting problem."

Systems Department: Training Spot for Future Managers

Systems departments can serve as a training ground for executive personnel, said Larry S. Provo, vice president and comptroller of the Chicago & North Western, in a recent speech at the Chicago Systems Conference.

"The responsibilities we have assigned it [the systems department] enable us to train and develop broad gauge executive-type personnel whose views are not confined to the narrow aspects of systems work," Mr. Provo said. "It is for this reason," he added, "that our management trainees start in the systems and procedures department and it is also the reason why internal auditing, the reviewing of contracts, and the processing of the annual budgets are assigned to this department. . . . These functions are the type that enable the systems department personnel to obtain a broad knowledge of the railroad quickly."

The possibilities of improving the operating efficiencies of companies through the use of modern data processing techniques are unlimited, Mr. Provo said, but he added that because managements often lack knowledge of the abilities of data processing equipment, they have been reluctant to authorize large scale integrated systems installations. "On the other hand, much of the responsibility for the failure of systems departments to achieve a more significant role" must fall on the departments, he said. "Systems personnel, in many cases, have been quite narrow in both their approach to problems and also in their understanding of the overall considerations involved in a particular problem."



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PEOPLE IN THE NEWS

ASSOCIATION OF AMERICAN RAILROADS.—Retired **Maj. Gen. I. Sewell Morris,** former commander of the **Defense Traffic Management Service,** joined the AAR May 1 as a specialist in mobilization planning and transportation preparedness (RA, May 6, p. 47). Gen. Morris will be assistant vice president on the staff of Vice President **Philip A. Hollar.** The position will involve cooperation with various government and private agencies engaged in defense activities.

BALTIMORE & OHIO.—**John S. Keneski,** supervisor of clerical and administration work Pittsburgh office, appointed district manager—passenger sales there, reporting to **Joseph D. Healey,** regional manager—passenger sales.

BURLINGTON.—**Frank L. Kartheiser,** vice president of the executive department, Chicago, retired April 30 after more than 50 years of service.

J. J. Alms, executive assistant to president, Chicago, appointed assistant vice president, executive department.

CANADIAN NATIONAL.—**Maurice Archer** has been appointed vice president—research and development, Montreal, effective July 1, succeeding **Dr. O. M. Solandt,** who is leaving the CN to take a position in Toronto with the de Havilland Aircraft of Canada, Ltd., and Hawker Siddeley Canada Ltd. Mr. Archer was formerly executive assistant to president of E.G.M. Cape & Company Ltd.

J. H. Easton, analytical service officer, Atlantic region, Moncton, N.B., appointed general superintendent—express—freight service, Prairie region, Winnipeg, Man., succeeding **H. C. Russell,** appointed express—freight liaison officer at Montreal.

William N. Sparrow, administrative assistant to area freight manager, Toronto area, appointed branch manager—freight sales, West Toronto.

C. W. Gainey, sales representative, office of general agent—freight and passenger, Seattle, Wash., appointed general agent—freight and passenger, Cleveland.

DETROIT, TOLEDO & IRONTON.—**Carl L. Froelich** named to the newly created position of district sales manager, Chicago.

GREEN BAY & WESTERN.—**C. H. Halvorson,** general superintendent maintenance—transportation, Green Bay, Wis., appointed general manager. **L. B. Ward** named executive assistant.

H. A. Knutson, assistant general freight agent, Green Bay, appointed superintendent—car service. Mr. Knutson will give specific attention to car procurement and supply, and special shipper requirements.

L. J. Van Dreese, assistant superintendent, Wisconsin Rapids, Wis., retired April 30. **C. G. Reisinger** appointed trainmaster; **E. H. Rickhoff,** transportation supervisor, and **Jerold Bruley,** train dispatcher. Title of **H. R. Nichols** changed from assistant trainmaster and dispatcher to assistant trainmaster.

LOUISVILLE & NASHVILLE.—**C. S. Sanderson,** general manager, Louisville, Ky., elected vice president and general manager. **F. Dixon Brooke,** assistant to president, Birmingham, Ala., elected resident vice president there.

Paul C. Major, staff assistant to vice president—accounting and taxation, Louisville, elected comptroller, to succeed **Carl F. Bratton,** advanced to assistant vice president—accounting.

MILWAUKEE.—**W. J. Hamann,** assistant agent, Milwaukee, Wis., named general car supervisor, Chicago terminal, to succeed **W. E. Doyle,** retired.

Maj. Gen. Morris
AAR

J. J. Alms
Burlington

Maurice Archer
CN

C. S. Sanderson
L&N

F. Dixon Brooke
L&N

Paul C. Major
L&N

Carl F. Bratton
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AAF makes all three types of filters used in engine intake and carbody service – metal, oil bath and AMER-kleen. We **recommend** AMER-kleen, and we think you'll **demand** AMER-kleen when you know all the facts. Write: J. K. Sparrow, Engine & Compressor Dept., American Air Filter Company, Inc., 111 Central Avenue, Louisville, Kentucky.

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MISSOURI PACIFIC.—W. J. Farrell, assistant trainmaster, Van Buren, Ark., appointed trainmaster, Hoisington, Kans., to replace **R. C. Speer,** transferred to the Red River division, **Texas & Pacific,** Shreveport, La.

SANTA FE.—Robert E. Gehrt, special assistant, public relations department, Chicago, promoted to traveling representative there. Mr. Gehrt's successor is **John W. Tilsch,** assistant editor, Santa Fe Magazine, who in turn is replaced by **Sheldon Butler,** editorial assistant. **Frank N. Grossman,** traveling representative, public relations department, San Francisco, advanced to special representative there.

SOO LINE.—Bertel E. Pearson, assistant to chief engineer, Minneapolis, named acting assistant to vice president, operations and maintenance there. Mr. Pearson's successor is **Warren B. Peterson,** division engineer, Enderlin, N.D., who in turn is replaced by **Gerald A. Nilsen,** assistant engineer, Marquette, Mich.

SOUTHERN PACIFIC.—Robert W. King, assistant manager public relations, Los Angeles, promoted to public relations manager there, succeeding **H. Brad Atwood,** resigned.

WABASH.—C. A. Lasco appointed assistant superintendent, Decatur division, Decatur, Ill. **T. J. Golian** and **E. F. Murry** named trainmasters, Decatur division, Decatur, and Montpelier division, Peru, Ind., respectively.

Supply Trade

Harry M. Wood, assistant chief mechanical officer—car, **Pennsylvania,** has been named executive vice president, **Keystone Railway Equipment Co.**

R. Gordon Thorpe has been appointed midwestern regional sales manager, **Strick Trailers,** at the Chicago plant, 9300 S. Drexel Avenue. Mr. Thorpe will continue to handle special assignments for the president and vice president of sales.

Steel railroad car wheels are being produced at the **Bradford, Kendall, Ltd.** plant near Brisbane, Australia, under license of a patented pressure casting process developed by **AMSTED** subsidiary, **Griffin Wheel Co.** The first overseas facility to produce wheels under licensing from AMSTED opened last July in South Africa.

Edelmuth Manufacturing Chemists, Inc., formerly of West Haven, Conn., has merged with **Wilkinson Chemicals,** Sackett Point Road, North Haven. The Edelmuth staff and manufacturing facilities have been moved to a new building just constructed by Wilkinson adjacent to its existing structure.

J. M. Olesen elected president and chief executive officer, **Lyon Metal Products, Inc. L. D. Deal,** former president, elected chairman of the board, succeeding **Henry A. Gardner,** named honorary chairman.

Effective June 1, main offices of **Western Railway Equipment Co.** and **Railway Devices Co.,** presently at St. Louis, will be located at Chicago Heights, Ill.

C. W. Lindstrom has been appointed executive vice president, **Enterprise Railway Equipment Co. William Gibson** named assistant vice president—engineering.

RAILROADING AFTER HOURS WITH JIM LYNE

LYNE

WORKING WHILE GETTING AN EDUCATION— I have received a number of letters from railroaders faced with the problem of keeping their names on seniority rosters while taking time off as necessary to complete their schooling. This is no easy problem, either for the employee involved or for the employer. It isn't just the railroad that should have an interest in easing the way toward work-and-education programs, but also the unions because, of course, these fellows doing unionized work naturally become members of the organizations.

Some people might suppose that the railroads—not being in a period of spectacular growth—would have difficulty in recruiting desirable people; but the kind of mail I get indicates that there are plenty of alert youngsters who are interested in railroading. There's no way to annex their services permanently to railroading, so effective as several years' seniority standing (assuring an attractive job) when they complete their schooling.

CURE FOR HIGHWAY CONGESTION—Some little time ago we drew attention to a series of advertisements favoring the improvement of railroad suburban service, as an economical means of relieving highway congestion. What was remarkable about the advertisements was that the advertiser was the oldest oil company in the United States—the Jenney Manufacturing Company of Boston. These ads have been reproduced by the Board of Public Transportation of Morris County, N. J., of which Tom Taber is chairman. If you'd like to have a set of these forceful and instructive ads, probably Mr. Taber would be glad to oblige, the address being Morristown, N. J.

Incidentally, I heard a novel suggestion the other day for the solution of urban transportation problems—which was, simply, to let the big cities fall apart from congestion of their traffic arteries, forcing people to move to smaller places. In other words, a good cure for a headache is to cut off the sufferer's head.

WANTS OLD EQUIPMENT—I have a letter from a gent (unknown to me personally) who wants to buy some "open-end passenger cars and a steam locomotive, vintage 1915-1930." I can't go starting an old equipment exchange business here, but I'm kind of curious myself to see whether there's much of this old equipment around any more. There certainly seems to be at least some demand for it.

SEAWAY 'SAVINGS'—In U.S. News & World Report magazine there recently appeared an interview with the St. Lawrence Seaway boss, J. H. McCann, in which he opposes increased tolls, in spite of the fact that the big ditch is operating in the red—just as railroaders predicted would happen. Mr. McCann wants to keep the tolls low, to provide "savings" in transportation expenses, to the steel and grain people, among others. Of course, these "savings" are fictional. The costs have to be paid by somebody—and if the users of the ditch don't pay them, then we taxpayers will. AAR VP J. Handly Wright has pointed out these and other economic facts of life in a letter to U.S. News. If more railroaders were letter-to-editor writers, the facts and causes of the current transportation chaos would be more widely known—and, hence, nearer the stage of corrective action.

HOSPITABLE AGENT—An overly modest reader (he doesn't disclose his name) in South St. Paul has sent me a clipping of Oliver Towne's column, from the Pioneer Press, telling about the GN station at Sandstone, Minn., where the agent, Bill McKenna, has done a job to make the place home-like.

He's provided lounge chairs, and he even has a library for the customers—books as well as periodicals and pictures. Agent McKenna has a lot of testimonials to his hospitality—one of them from a woman motorist who merely stopped to powder her nose, and commended the facilities. For such patrons, I'd suppose a dime-in-the-slot lock would not be amiss.

But an agent who really takes pride in his station deserves all the praise he is likely to get. If such agents were more numerous, quite possibly there'd be more open stations.

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UNION PACIFIC RAILROAD COMPANY

(INCLUDING ITS LEASED LINES)

SIXTY-SIXTH ANNUAL REPORT — YEAR ENDED DECEMBER 31, 1962

REPORT OF THE BOARD OF DIRECTORS ON THE YEAR'S BUSINESS

New York, N. Y., April 25, 1963.

TO OUR STOCKHOLDERS:

As explained in our brief annual report released in March, net income of $82.5 million, as reported under accounting rules prescribed by the Interstate Commerce Commission has been reduced in our income statement to $68.6 million, in conformity with generally accepted accounting principles. The adjustment of $13.9 million represents the amount of the reduction in current Federal income taxes resulting from advance allowances for depreciation and amortization, which under Interstate Commerce Commission regulations represent *depreciation charges to be made in the accounts over the entire lives of the facilities involved.* In effect, current net income as reported under I.C.C. regulations is thus being artificially inflated at the expense of net income, stated on the same basis, at some future time. In the opinion of the management, which is supported by leading accounting authorities, the adjustment made in our income statement is essential for the purposes of setting out the factual situation and preventing misleading assumptions by our Stockholders and the public as to future income prospects of the Company.

Net income for the year as adjusted represents an increase of $2.4 million, or 3.6 per cent, over similarly adjusted income for 1961. This improvement resulted chiefly from increases in transportation earnings (exclusive of the temporary income tax reductions) and in interest income, partially offset by decreases in income from oil and gas operations and from miscellaneous sources.

Adjusted net income per share of common stock, after preferred dividend requirements, was $2.88 compared with $2.78 per share in 1961. Dividends of $1.60 per share declared on common stock in 1962 amounted to 56 per cent of the net earnings per share.

Continued

The organization of the Union Pacific into Operating Divisions, inaugurated in 1961, has been working well. The tabulation below shows a breakdown by Divisions of 1962 net income *before Federal income taxes*, compared with the previous year:

	1962	1961 (Restated)	Increase (+) or Decrease (—)
Transportation Division	$91,638,740	$91,017,526	+ $621,214
Natural Resources Division	23,767,774	26,741,837	— 2,974,063
Land Division	875,979	774,160	+ 101,819
Non-Divisional	1,807,633	983,866	+ 823,767
Total	$118,090,126	$119,517,389	—$1,427,263

Gross expenditures for investment in equipment and other transportation property during the year amounted to $64.4 million, or $14.5 million more than in 1961. Such huge outlays are a continuing necessity to accomplish operating economies and provide improved transportation services. Incidentally, most of such expenditures in 1962 were of the kind for which a 7% investment credit is allowed to apply against current Federal income taxes, of which 48 per cent represents a permanent tax saving.

The year 1962 was notable for a general feeling of cautious optimism with respect to the future of the railroad industry, occasioned by a number of different factors, some of which are outlined below.

President Kennedy's transportation message to Congress on April 5, 1962, mentioned in last year's annual report, was the first such official recognition of certain urgent transportation problems to which the railroads have been vainly calling attention for years. Legislative enactment of the President's program may take considerable time, but public presentation of the facts represents a long step forward, and offers hope that at least some of the discriminatory regulations affecting the railroads will be removed or substantially modified, so that they may be able to compete on a more equitable basis with other forms of transportation in the future.

Recommendations by the Presidential Railroad Commission in its report of February 28, 1962, on employe work rules, and especially the recommendation with respect to gradual elimination of the positions of firemen-helpers on diesel locomotives in road-freight and yard services, appear to have a reasonably good chance of being put into effect. As might perhaps have been anticipated, the labor organizations concerned resisted this development in the courts, despite the Commission's recommendations that were designed to make the proposed changes as painless to the affected employes as reasonably practicable. However, the ruling by the United States Supreme Court on March 4, 1963, has from a legal standpoint cleared the way for affirmative action. If and when the new work rules are finally put into effect, a large and economically unjustified burden will have been lifted from the railroad industry.

Another encouraging aspect of the general picture is the increasing progress made by the railroads themselves in their bold origination and implementation of new ideas, such as the extension of piggy-back services, use of multi-level cars and other specialized freight cars, introduction of new rate-making procedures, and so on.

Finally, authorization by the Interstate Commerce Commission of certain railroad mergers has been a healthy development. When such mergers are soundly conceived, their consummation should effectuate worthwhile economies, improve administration, and strengthen the whole railroad industry.

Continued

(ADVERTISEMENT)

INCOME ACCOUNT

	1962	1961 (restated)	Increase (+) or Decrease (—)
TRANSPORTATION OPERATIONS			
Operating revenues	$512,124,915	$499,324,448	+$12,800,467
Operating expenses	370,157,101	360,798,813	+ 9,358,288
Revenues over expenses	$141,967,814	$138,525,635	+ $3,442,179
*Railway tax accruals	73,469,279	86,610,789	— 13,141,510
Railway Operating Income	$68,498,535	$51,914,846	+$16,583,689
Equipment rents (debit)	20,167,039	19,029,381	+ 1,137,658
Joint facility rents (debit)	1,556,168	1,702,854	— 146,686
Net income from Transportation Operations	**$46,775,328**	**$31,182,611**	**+$15,592,717**
INCOME FROM INVESTMENTS AND OTHER SOURCES			
*Net income from oil and gas operations	$23,888,982	$26,030,815	— $2,141,833
Royalties from oil and gas leases	395,977	410,702	— 14,725
Dividends on stocks owned	4,374,624	4,418,546	— 43,922
Interest on bonds and notes owned	5,071,887	3,968,854	+ 1,103,033
Other interest income	675,077	548,777	+ 126,300
Rents from lease of road	122,579	122,579	
Miscellaneous rents	804,350	806,669	— 2,319
Miscellaneous income	2,863,146	3,448,918	— 585,772
Profits and losses—net (property sales, etc.)	1,067,766	2,442,946	— 1,375,180
Total	$39,264,388	$42,198,806	— $2,934,418
Total Income	$86,039,716	$73,381,417	+$12,658,299
Miscellaneous tax accruals	$311,685	$534,888	— $223,203
Other deductions from income	84,167	448,776	— 364,609
Total deductions from income	$395,852	$983,664	— $587,812
Income available for fixed charges	**$85,643,864**	**$72,397,753**	**+$13,246,111**
FIXED CHARGES			
Interest on funded debt	$3,141,455	$2,996,256	+ $145,199
Other fixed charges	12,283	15,372	— 3,089
Total	$3,153,738	$3,011,628	+ $142,110
Net income under accounting rules prescribed by ICC	$82,490,126	$69,386,125	+$13,104,001
†Reduction necessary to conform accounting for current Federal income taxes to generally accepted accounting principles.	13,860,492	3,117,024	+ 10,743,468
NET INCOME	**$68,629,634**	**$66,269,101**	**+ $2,360,533**
Net income per share of common stock (after preferred dividends):			
Under accounting rules prescribed by I.C.C.	$3.50	$2.92	+ $.58
Under generally accepted accounting principles	2.88	2.78	+ .10
DIVIDENDS DECLARED ON UNION PACIFIC RAILROAD CO. STOCK			
On preferred stock (4%)	$3,981,724	$3,981,724	
On common stock	35,886,776	35,886,776	
Total dividends declared	$39,868,500	$39,868,500	

*"Railway tax accruals" include *Federal taxes on income from all sources.* Such taxes on income from oil and gas operations were approximately $7,089,500 in 1962 and $7,818,900 in 1961.

†Reduction consists of (1) the tax effect arising from excess of depreciation and amortization allowed for tax purposes over depreciation recorded in the accounts under accounting rules prescribed by the Interstate Commerce Commission, and (2) a portion (52%) of the 7% investment tax credit, both of which it is anticipated will be offset by additional taxes in future years.

Wheel Problems

(Continued from page 26)

present. These axles were SAE 1045 steel, which had been oil-quenched and drawn before induction hardening. The discussion revealed that the induction hardening of the axles was done with a 10,000 cycle unit operating at about 100 KW. The influence of slid flat wheels on the stresses in the axle were measured during the Japanese National Railways' study. It was of interest to hear in the discussion that the Japanese National Railways also use induction hardened rails on curves.

A paper by E. S. Burdon of the British Railways Research Department dealt with the problem of axle fatigue failures in the wheel hub. The paper of Messrs. A. J. Fenner, J. Tait and J. Morley of National Engineering Laboratory and Taylor Brothers, respectively, dealt with the fatigue strength of wagon unmachined axle middles. The latter paper reported that machining and polishing almost doubled the fatigue strength of their test pieces. Recently, axles with middles having a commercial turned finish have developed more interest in America. This type of axle was favored by the authors due to the greater fatigue strength.

The Congress had a historical review of wheel developments from 2700 B.C. to date by Lehmann of Huttenwerk Oberhausen in Germany.

Today's increasing speeds and loads have developed keen interest in continuing this advancement in the technology of wheels and axles. At the same time, economic necessities have imposed serious restrictions upon the solutions to these wheel set problems. The work represented by the technical papers fosters hopes that wheel set improvements will meet the challenge of more severe service within the economic restrictions.

Market Outlook

Carloadings Rise 2.5% Above Previous Week's

Loadings of revenue freight in the week ended May 4 totaled 590,981 cars, the Association of American Railroads announced on May 9. This was an increase of 14,142 cars, or 2.5%, compared with the previous week; an increase of 3,568 cars, or 0.6%, compared with the corresponding week last year; and an increase of 47,537 cars, or 8.7%, compared with the equivalent 1961 week. Ton-miles generated by carloadings in the week ended May 4 are estimated at approximately 12.7 billion, an increase of 6.8% over the corresponding week of 1962, and 20.1% over 1961.

REVENUE FREIGHT CARLOADINGS
For the week ended Saturday, May 4

District	1963	1962	1961
Eastern	83,377	82,469	78,405
Allegheny	101,172	96,535	85,747
Pocahontas	56,732	51,643	46,188
Southern	116,367	115,952	109,331
Northwestern	77,479	84,538	70,975
Central Western	115,291	116,319	113,350
Southwestern	40,563	39,957	39,448
Total Western Districts	233,333	240,814	223,773
Total All Roads	590,981	587,413	543,444
Commodities:			
Grain and grain products	51,409	50,939	45,598
Livestock	4,446	4,560	4,914
Coal	109,735	101,394	92,289
Coke	9,064	7,357	6,217
Forest Products	36,875	38,688	36,200
Ore	37,401	45,680	25,804
Merchandise l.c.l.	18,144	23,881	29,293
Miscellaneous	323,907	314,914	300,129
May 4	590,981	587,413	543,444
April 27	576,839	577,865	544,379
April 20	561,450	569,493	533,037
April 13	556,081	554,866	522,445
April 16	546,065	547,674	505,930
Cumulative total, 18 weeks	9,431,858	9,739,373	9,033,520
Estimated revenue ton-miles (millions), 18 weeks	207,400	201,775	180,490

PIGGYBACK CARLOADINGS.—U. S. piggyback loadings for the week ended April 27 totaled 15,624 cars, compared with 13,499 for the corresponding 1962 week. Loadings for 1963 up to April 27 totaled 248,866 cars, compared with 218,118 for the corresponding period of 1962.

IN CANADA.—Carloadings for the seven-day period ended April 21 totaled 62,306 cars, compared with 54,278 for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada		
April 21, 1963	62,306	22,614
April 21, 1962	54,876	22,727
Cumulative Totals		
April 21, 1963	947,537	357,662
April 21, 1962	961,518	373,264

New Equipment

FREIGHT-TRAIN CARS

► *Chesapeake & Ohio.*—Ordered 155 100-ton Center-Flow covered hopper cars from ACF for delivery in August and September. Cost will be in excess of $2 million.

► *Wabash.*—Ordered for its subsidiary—New Jersey, Indiana & Illinois—10 89-ft, 70-ton flat cars from Whitehead & Kales for June delivery.

► *Bad Order Ratio 0.2% Lower Than Last Year.*—Class I roads on April 1, owned 1,542,856 freight cars, 55,128 less than on April 1, 1962, according to AAR report summarized below. Bad Order ratio was 0.2% lower than on April 1, 1962.

	April 1, 1963	April 1, 1962	Change
Car Ownership	1,542,856	1,597,984	—55,128
Waiting Repairs	128,690	136,151	— 7,461
Repair Ratio	8.3%	8.5%	— 0.2%

FOREIGN

► *Companhia Vale do Rio Doce S.A. of Rio de Janeiro.*—Ordered 15 diesel-electric locomotives from General Motors Diesel Ltd., of Canada for $2.4 million.

New Facilities

► *Canadian National.*—Ordered one basic hotbox detector system from Servo Corp., which will have a recording tape unit.

► *Metropolitan Transit Authority of Boston.*—Plans construction of 100- x 300-ft shop at Dorchester, Mass., to service and repair the 92 new transit cars now going into service on the MTA's Cambridge-Dorchester line (RA, March 4, 1963, p. 16). The project will permit abandonment and sale of MTA shop and yard at Harvard, the line's other terminal where the cars being replaced have been maintained.

► *New York Central.*—Ordered 15 sets of transistorized 2R series radio sets from Union Switch & Signal division of WABCO for use on yard locomotives at Boston, Mass. Also included in the order is one set of base station equipment.

► *Rock Island.*—Is increasing the clearance level in tunnels at Freeburg, Eugene and Argyle, Mo., at a cost of $200,000, to accommodate multi-level automobile rack cars. Work began April 15 and is expected to be completed in July without interruption of train service.

FOREIGN

► *India.*—Has been awarded a $19-million loan by the Export-Import Bank of Washington to cover purchases of U.S. machinery, materials and services required for the establishment, at Varanasi, of India's first diesel-locomotive works. The plant, which will cost a total of $47 million, is designed eventually to produce 250 locomotives annually under an agreement with Alco. A portion of the loan will also cover costs of U.S.-made components for the first 29 locomotives which will be shipped to India and assembled at Varanasi.

White Would Head Erie-Lackawanna

E-L's directors, who feel a change in top management is 'highly desirable,' want the D&H chief executive to head E-L. With ICC approval, he would continue to serve as a D&H director.

William White has applied to the ICC for authority to become a director, chairman of the board and chief executive officer of the financially-troubled Erie-Lackawanna while continuing to serve as a director of the Delaware & Hudson. Mr. White, now chairman and chief executive officer of D&H, will retire as chief executive officer but he plans to remain on the D&H board. M. G. McInnes is now president and chief executive officer of E-L.

The E-L board has adopted a resolution bidding for Mr. White's services, and the D&H board has no objection, Mr. White's application to the ICC says. Attached to the application is a supporting letter from Harry C. Hagerty, a director of E-L and chairman of its board's committee on management and personnel.

● **Change 'highly desirable.'** Because of the road's critical financial condition, the E-L board has become convinced that "new top level management is highly desirable, if not a downright necessity," Mr. Hagerty said. His committee, he continued, has canvassed the situation and decided that the new chief executive officer should be a person not now connected with the road but nevertheless familiar with its properties and operations.

The committee concluded that Mr. White meets these requirements. He has 50 years of railroad experience, including 25 years with the former Erie, where he rose to be general manager of the eastern division. And he also served as president of the former Delaware, Lackawanna & Western for 11 years. The committee had several discussions with Mr. White, after which, as Mr. Hagerty put it, "he advised that, with understandable reluctance at this point in his life, he would be willing to undertake the job of chief executive of Erie-Lackawanna consistently with his responsibilities to the Delaware & Hudson."

● **Until 1966.** Mr. White's retirement as chief executive officer of D&H is now scheduled for Sept. 1, but he would be willing to advance that date to come to E-L, Mr. Hagerty also said.

The E-L director reported, too, that Mr. White had also said he would not expect to remain with E-L beyond Dec. 31, 1966, "or such shorter period as would meet the needs of Erie-Lackawanna." Mr. Hagerty's letter closed with an expression of his committee's feeling that the necessary "special circumstances" warranting favorable Commission action on the application are present in view of Mr. White's availability and his "peculiar capabilities" for the position.

The application says there is now no affiliation between D&H and E-L, but adds that there appears to be "unanimity of thought" that they should both end up in the proposed Norfolk & Western-Nickel Plate-Wabash system—or in the proposed Pennsylvania-New York Central system, as a second choice.

Meanwhile, no joint coordination projects are contemplated by D&H and E-L. If such proposals were considered during Mr. White's service with E-L they would be submitted to the Commission for approval, the application says.

ICC Still Wants More Rate Power

The ICC still opposes President Kennedy's call for the ending of minimum-rate regulation for the transportation of commodities in bulk and agricultural products. The Commission adheres to its position in favor of the alternative, which the railroads consider unrealistic, of repealing present provisions of the Interstate Commerce Act which leave water transportation of commodities in bulk and truck transportation of agricultural products free of all regulation.

The Commission's current position was set out in letters which its chairman, Commissioner Laurence K. Walrath, sent to chairmen of the Senate Commerce Committee and the House Committee on Interstate and Foreign Commerce, which are holding hearings on bills to implement the recommendations of President Kennedy's Transportation Message (RA, May 6, p. 10). The minimum-rate bills are H.R. 4700 and S. 1061, while bills to implement various other recommendations of the President, are H.R. 4701 and S. 1062.

Since the ICC made a comprehensive presentation at committee hearings last year, Chairman Walrath's letter was restricted to matters which, the Commission thinks, "deserve emphasis or elaboration." Among them is the controversy as to what authority the Commission, after losing its minimum-rate power, would have to "require the maintenance of a stable and non-discriminatory rate structure."

The Commission thinks it would have no effective control over disadvantages and preferences resulting from rate relationships as between depressed carrier-competitive rates and non-competitive normal rates. The Walrath letter also said that the minimum-rate power "is used frequently in controlling destructive and damaging rate wars."

The letter took note of new language in present versions of the minimum-

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rate bills, which provide that the Commission shall retain "all currently effective authority" to condemn rates as unjustly discriminatory or unduly prejudicial. The Commission does not think that would do anything in the way of substituting for the minimum-rate power.

Also, the Commission "seriously questions whether the antitrust laws can provide adequate safeguards in intermodal competitive cases," the letter said. It closed with an offer of Commission cooperation "in any study of any other or modified approaches to achievement of equality of competitive opportunity."

The trucking industry's opposition presentation at the Congressional hearings on the minimum-rate bill was followed by favorable presentations from the Chamber of Commerce of the United States, various farm organizations and other representatives of shippers. The president of the Air Transport Association, Stuart G. Tipton, also appeared to ask that provision relating to air transport be eliminated from the bills which he regards as tailored to surface transportation. The minimum-rate bills now contemplate across-the-board removal of the power of regulatory agencies to fix minimum rates for the transportation of bulk and agricultural commodities.

The Railway Labor Executives' Association cancelled its date to make an opposition presentation May 9 before the Senate Commerce Committee.

Bigger Legislative Role for Suppliers?

Railroad suppliers have been urged to take a more active role in supporting legislation beneficial to the railroad industry. The plan was outlined in a letter to the heads of seven supply associations by F. J. Steinberger, vice president and general purchasing agent, Santa Fe, and chairman of the Purchases and Stores Division, AAR.

Mr. Steinberger suggested that the supplier associations band together into a parent organization similar to the AAR to act on matters of national importance. "An organization of this type," said Mr. Steinberger, "would not interfere with the normal operations of any of the groups or associations, but would be in a position, in times of need, to speak for the entire railway supply industry. Certainly their voice would be listened to, whereas the voices of the individual associations are of little or no effect."

The plan was conceived by the general committee of the P&S Division which passed a resolution at its April 18 meeting in New Orleans, La., advocating the idea.

Railway Progress Institute, which has been a leader in legislative activity on behalf of the supply industry, responded quickly to the suggestion, and expressed appreciation for the P&S Division's resolution; and, carrying out "this resolution's suggestion, the RPI will promptly set up a meeting to which it will invite the railway supply organizations, named in the resolution—plus any others which might be enlisted in such a legislative effort—to explore ways and means of effectively coordinating all supplier activities in support of sound legislative programs for the railroads."

The organizations to which the P&S Division's resolution went were: American Wood Preservers Association; Association of Track and Structure Suppliers; National Railway Appliance Association; Railway Supply Association; Railway Tie Association, the Railway Signal and Communications Suppliers Association; and the RPI.

Douglas Addresses BLE Centennial

The Brotherhood of Locomotive Engineers set its sights on a second hundred years last week—proud of its record over the past century but sobered by what Grand Chief R. E. Davidson termed "so many difficult problems" still facing the organization.

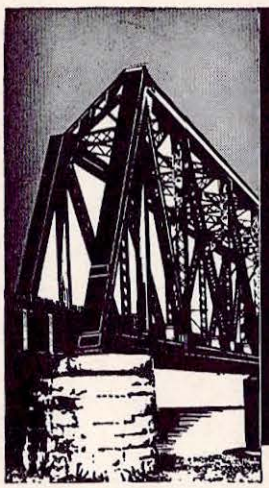
More than 1,000 BLE and auxiliary members and guests spent four days in Detroit celebrating the centennial—and still had enough energy left to cheer lustily as Senator Paul Douglas tore into rail management on the subject of mergers.

The Illinois Democrat, substituting for Senator Estes Kefauver (D.-Tenn.), conceded that some roads are in financial difficulty and that "some consolidation probably should occur." But, he added, merger proposals "should be scrutinized most carefully."

The Senator was encouraged by three recent developments—Senator Kefauver's continuing fight for a merger moratorium; the activity of the Justice Department in opposition to mergers; and the introduction last week by Senator Vance Hartke (D.-Ind.) of a resolution calling for a select-committee investigation of the railroads' finances.

While the Senator leveled his main fire at management, he also took a swipe at the ICC and at the rail brotherhoods themselves. The Commission, he charged, "is still slow, inert . . . and does not adequately protect the public."

His chiding of the unions was a bit more gentle, but still with a bite. Noting with some bewilderment the voting records of a number of rail centers, the Senator told his BLE audience that it seems "you applaud the progressives and liberals 364 days out of the year—and then on election day you go out and vote conservative."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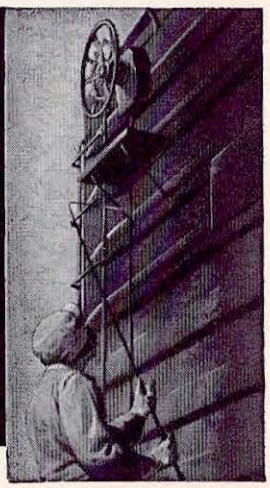
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Per Diem Change Set for Jan. 1, 1964

A new system, reflecting car values, will be administered in the AAR Operating-Transportation Division, which will set up a Control Center and publish a Master List of cars by per diem groups.

The new multi-level per diem rental system for freight cars interchanged between railroads will become effective January 1, 1964, and will be administered by a Control Center in the AAR's Operating-Transportation Division in Washington. The format and instructions for implementation of the new system were sent to all United States and Canadian railroads last week by the Division's executive vice-chairman, C. A. Lauby.

The multi-level system, with its varying rentals reflecting freight-car values, will supplant the uniform-charge plan which has been in effect continuously for more than 60 years (RA, March 25, p. 9). The uniform charge is now $2.88 per car per day.

The new system will embody a scale of charges ranging from $2.16 per car per day for cars worth $1,000 or less to $7.74 for cars worth more than $20,000. "Worth" means original cost less depreciation. The in-between rates will be graduated upward with each $5,000 increase in a car's worth. These worth and rate brackets are: $1,000.01 to $5,000, $2.79; $5,000.01 to $10,000, $3.58; $10,000.01 to $15,000, $4.50; $15,000.01 to $20,000, $6.15.

● **Based on vote.** The change was recommended by the Operating-Transportation Division's General Committee, cleared by the AAR's Board of Directors, and adopted by a vote of car-owning railroads. The vote was by letter ballot on the basis of car ownership—one vote for each revenue freight car listed in the January 1963 issue of the Equipment Register. Cars eligible to be voted totaled 1,744,013. Sixty-six per cent of them (1,151,420) were voted in favor of the new rates; 30% (524,812) carried negative votes; and 4% (67,781) were not voted.

The Control Center for administration of the new system is in Mr. Lauby's office. The Arbitration Committee of the AAR's Mechanical Division and a Cooperating Committee of Accounting Officers are also included in the administrative set-up.

The Center will publish the Master List of per-diem cars, which will be an annual with monthly supplements. It will keep each per-diem car assigned to its proper rental-rate group. Some consideration was given to expansion of the Equipment Register to include this information, but the instructions for implementation explain that this idea was rejected because:

"The Official Railway Equipment Register is a tariff filed with the Interstate Commerce Commission and is used extensively for rate tariff work as well as car distribution. To identify individual cars or series of cars in the Official Railway Equipment Register for per diem group purposes would result in increasing the size of the Equipment Register by a minimum of five times its present size, making it extremely bulky for car distribution and rate tariff purposes as well as expensive to maintain."

● **July 15 deadline.** The timetable for making the new system effective next January 1 has a July 15 deadline for submission to Mr. Lauby's office of information required on individual cars, and an October 1 deadline for publication of the first Master List. This will be distributed to railroads for use in establishing their own administrative programs. The necessary alterations in the Code of Per Diem Rules — Freight will be submitted "within the next few weeks" to signers of the Bulwinkle-Act Agreement under which per diem procedures have immunity from anti-trust laws.

First section of the format and instructions for implementation of the new system deals with valuations of the freight cars involved. There it is stipulated that the valuation of each car for per diem grouping will be original cost plus the cost of additions and betterments as carried in the Equipment Valuation Record of the car owner. The instructions add:

"Under accounting rules, additions and betterments to freight cars are capitalized and reflected in the Equipment Valuation Record and no further adjustment of this record should be made for initial per diem grouping purposes, except for cars acquired from owning railroad's car building shop."

As to these cars built in railroad shops, the instructions recognize that, in some cases, all costs are not capitalized and included in the Equipment Valuation Record. For these cases, the instructions provide for additives to build up recorded values to the point where they reflect non-capitalized costs. Any such adjustments will be subject to review by the Cooperating Committee of Accounting Officers. Moreover, additives may not be applied to additions and betterments made subsequent to the original date of construction of a car built in railroad shops.

Rebuilt cars, for purposes of the valuation, will be cars rebuilt in accordance with ICC rules and AAR Mechanical Interchange Rules. Thus, the valuation of rebuilt cars will be the valuation carried in the owning road's Equipment Valuation Record. The value of leased cars will be the value shown in the Equipment Valuation Record of the owner.

The value of cars purchased second-hand will be the value shown in the

Multi-le

Year installed	Classification		Value Gr- ($2.1	
	Age (year)	Condition per cent	From	
1934 & prior	30	10%	Nil	$10,[illegible]0
1935	29	13	"	7,6[illegible].30
1936	28	16	"	6,250.00
1937	27	19	"	5,263.15
1938	26	22	"	4,545.4[illegible]
1939	25	25	"	4,000.00
1940	24	28	"	3,571.42
1941	23	31	"	3,225.80
1942	22	34	"	2,941.17
1943	21	37	"	2,70[illegible]0
1944	20	40	"	2,500.00
1945	19	43	"	2,325.58
1946	18	46	"	2,173.91
1947	17	49	"	2,040.81
1948	16	52	"	1,923.07
1949	15	55	"	1,818.18
1950	14	58	"	1,724.13
1951	13	61	"	1,63[illegible].34
1952	12	64	"	1,562.50
1953	11	67	"	1,492.53
1954	10	70	"	1,428.57
1955	9	73	"	1,369.86
1956	8	76	"	1,315.78
1957	7	79	"	1,265.82
1958	6	82	"	1,219.51
1959	5	85	"	1,176.47
1960	4	88	"	1,136.36
1961	3	91	"	1,098.90
1962	2	94	"	1,063.82
1963	1	97	"	1,030.92
1964	0	100	"	1,000.00

Equipment Valuation Record of the present owner. This is subject to the following: "Valuation of secondhand cars installed after the effective date of the multi-level per diem rates will be subject to the approval of the Co-operating Committee of Accounting Officers and the Arbitration Committee of the Mechanical Division."

● **Depreciation limit 90%.** The depreciation rule provides that all cars installed in a calendar year will be depreciated the following January 1, regardless of the month installed, and each succeeding January 1, at the rate of 3% a year. The rule also provides that no car, regardless of age, shall depreciate more than 90%, "as 10% of the value shall always be retained to represent salvage value."

The instructions include the table, reproduced herewith, which car-owning railroads can use to assign their cars to proper per-diem groups and thus give the Control Center the information it will require for the initial issue of the Master List. The instructions give this example of how the table is to be used:

"A car is shown in the Equipment Valuation Record as having an undepreciated value of $12,657.10 installed in 1948. The extreme left column of the table shows the year installed and the horizontal line opposite 1948 should be used. Inasmuch as the value of this car falls within the value $9,615.39 to $19,230.76 as shown in Group 3, the car should be subject to the Group 3 per diem rate of $3.58. Had this same car been installed in 1943 at the same value, it would fall in the value group from $2,702.71 to $13,513.51 as shown opposite 1943 in Group 2, and the per diem rate would be $2.79."

● **Control card file.** The plan for the control set-up contemplates that a control card will be established for each car and maintained in the Control Center on data processing cards. Each card will carry this information: card code, car initial, car number, AAR Mechanical designation, owned or leased, year installed new, year installed rebuilt, year installed secondhand, original cost plus additions and betterments, adjusted original cost plus additions and betterments for cars built new in railroad shops, per diem group applicable.

For initial establishment of the control file, car owners equipped with data processing systems will furnish an interpreted punch card for each of their cars to the Control Center. Owners not equipped with data processing systems will furnish information by individual cars, in ascending car-number order for conversion at the Center to data processing cards. This is the information which is due July 15. of this year.

From it will come the first Master List, scheduled for October 1, as noted above, but thereafter to be published annually as of January 1. To supply information for the monthly supplements, car owners are asked to keep the Control Center currently informed of all changes in their car situations. "Cars installed should be reported in advance of installation so they can be included in a monthly supplement before actual installation," the instructions say.

Mr. Lauby's letter of transmittal said that railroads requiring additional copies of the format and instructions will receive them upon request to his office—324 Transportation Building, Washington 6, D.C. It also said that questions regarding the format and instructions "may be submitted to this office where every effort will be made to give prompt assistance."

Per Diem Rental System: How Cars Are Classified

Value Group 2 ($2.79)		Value Group 3 ($3.58)		Value Group 4 ($4.50)		Value Group 5 ($6.15)		Value Group 6 ($7.74)	
From	To	From	To	From	To	From	To	From	To
Original Cost Plus Additions and Betterments—Undepreciated									
$10,000.01	$50,000.00	$50,000.01	$100,000.00	$100,000.01	$150,000.00	$150,000.01	$200,000.00	$200,000.01	& over
7,692.31	38,461.53	38,461.54	76,923.07	76,923.08	115,384.61	115,384.62	153,846.15	153,846.16	"
6,250.01	31,250.00	31,250.01	62,500.00	62,500.01	93,750.00	93,750.01	125,000.00	125,000.01	"
5,263.16	26,315.78	26,315.79	52,631.57	52,631.58	78,947.36	78,947.37	105,263.15	105,263.16	"
4,545.46	22,727.27	22,727.28	45,454.54	45,454.55	68,181.81	68,181.82	90,909.09	90,909.10	"
4,000.01	20,000.00	20,000.01	40,000.00	40,000.01	60,000.00	60,000.01	80,000.00	80,000.01	"
3,571.43	17,857.14	17,857.15	35,714.28	35,714.29	53,571.42	53,571.43	71,428.57	71,428.58	"
3,225.81	16,129.03	16,129.04	32,258.06	32,258.07	48,387.09	48,387.10	64,516.12	64,516.13	"
2,941.18	14,705.88	14,705.89	29,411.76	29,411.77	44,117.64	44,117.65	58,823.52	58,823.53	"
2,702.71	13,513.51	13,513.52	27,027.02	27,027.03	40,540.54	40,540.55	54,054.05	54,054.06	"
2,500.01	12,500.00	12,500.01	25,000.00	25,000.01	37,500.00	37,500.01	50,000.00	50,000.01	"
2,325.59	11,627.90	11,627.91	23,255.81	23,255.82	34,883.72	34,883.73	46,511.62	46,511.63	"
2,173.92	10,869.56	10,869.57	21,739.13	21,739.14	32,608.69	32,608.70	43,478.26	43,478.27	"
2,040.82	10,204.08	10,204.09	20,408.16	20,408.17	30,612.24	30,612.25	40,816.32	40,816.33	"
1,923.08	9,615.38	9,615.39	19,230.76	19,230.77	28,846.15	28,846.16	38,461.53	38,461.54	"
1,818.19	9,090.90	9,090.91	18,181.81	18,181.82	27,272.72	27,272.73	36,363.63	36,363.64	"
1,724.14	8,620.68	8,620.69	17,241.37	17,241.38	25,862.06	25,862.07	34,482.75	34,482.76	"
1,639.35	8,196.72	8,196.73	16,393.44	16,393.45	24,590.16	24,590.17	32,786.88	32,786.89	"
1,562.51	7,812.50	7,812.51	15,625.00	15,625.01	23,437.50	23,437.51	31,250.00	31,250.01	"
1,492.54	7,462.68	7,462.69	14,925.37	14,925.38	22,388.05	22,388.06	29,850.74	29,850.75	"
1,428.58	7,142.85	7,142.86	14,285.71	14,285.72	21,428.57	21,428.58	28,571.42	28,571.43	"
1,369.87	6,849.31	6,849.32	13,698.63	13,698.64	20,547.94	20,547.95	27,397.26	27,397.27	"
1,315.79	6,578.94	6,578.95	13,157.89	13,157.90	19,736.84	19,736.85	26,315.78	26,315.79	"
1,265.83	6,329.11	6,329.12	12,658.22	12,658.23	18,987.34	18,987.35	25,316.45	25,316.46	"
1,219.52	6,097.56	6,097.57	12,195.12	12,195.13	18,292.68	18,292.69	24,390.24	24,390.25	"
1,176.48	5,882.35	5,882.36	11,764.70	11,764.71	17,647.05	17,647.06	23,529.41	23,529.42	"
1,136.37	5,681.81	5,681.82	11,363.63	11,363.64	17,045.45	17,045.46	22,727.27	22,727.28	"
1,098.91	5,494.50	5,494.51	10,989.01	10,989.02	16,483.51	16,483.52	21,978.02	21,978.03	"
1,063.83	5,319.14	5,319.15	10,638.29	10,638.30	15,957.44	15,957.45	21,276.59	21,276.60	"
1,030.93	5,154.63	5,154.64	10,309.27	10,309.28	15,463.91	15,463.92	20,618.55	20,618.56	"
1,000.01	5,000.00	5,000.01	10,000.00	10,000.01	15,000.00	15,000.01	20,000.00	20,000.01	"

YOU OUGHT TO KNOW

A mammoth load of spinach—some 139,986 frozen pounds of it—was recently test-loaded into one of Pacific Fruit Express' new 70-ton Hydra-Cushion mechanical refrigerator cars and shipped from Santa Cruz, Calif. to Hartford, Conn., to test maximum capabilities of the car. PFE believes the shipment to be the heaviest carload of frozen foods or other perishables ever moved by railroad.

A new UP passenger station was formally opened in Pomona, Calif. last week as the railroad's contribution to the city's privately-financed downtown renewal program. The station is part of a $500,000 Union Pacific investment in a transportation center, which includes a heliport near a nine-block long pedestrian mall. UP moved its tracks 40 feet to assist with the downtown planning.

A New York World's Fair monorail will be built and operated by American Crane & Hoist Corp., of Los Angeles, with construction scheduled to get under way this month. The $3-million, 8,400-foot double-loop Air-Rail line will be equipped with 14 40-passenger cars. The Air-Rail electric system is of the suspended type, patterned after the Wuppertal monorail in Germany.

ICC Service Order No. 943, effective May 8, requires expedited return home of plain 40-foot box cars owned by seven western railroads. The order, which involves penalties for violations, implements the AAR's Special Car Order No. 106.

Proposed merger of the Atlantic Coast Line and Seaboard Air Line is now before the ICC for decision. The Commission last week heard oral argument on Examiner H. J. Blond's proposed report, which recommends approval of the proposal, subject to conditions (RA, Sept. 3, 1962, p. 34).

The long-term rail outlook is showing "increasing evidence of improvement" stockholders of General Signal Corp. were advised in the firm's first quarter 1963 report. "We have seen favorable developments on mass transportation legislation and on prospective railroad mergers, as well as increasing awareness of the need for new transit facilities. There has, in addition, been an increase in capital spending plans by railroads," the report states.

Presidential power to take over and operate transportation systems for purposes related to national defense is proposed in a bill (S.1461) introduced in the Senate by the chairman of its Commerce Committee, Senator Warren Magnuson (D.-Wash.). Mr. Magnuson said the bill was introduced at the request of the Department of the Air Force, which advised him that it was not related to any existing transportation situation.

Railroads' plea for equal treatment as to disclosure of commodity statistics has been denied by the ICC. The plea was a petition in No. 34206, the case in which the Commission is proposing a new commodity classification. Commodity statistics now reported by individual railroads and water carriers are made public by the Commission, but it does not release figures for individual motor carriers (RA, April 1, p. 10).

Merger of New England roads into one system would provide the area "with economies and much better service than is now available," Pennsylvania Board Chairman James M. Symes told the railroad's annual stockholders' meeting last week. He said he believed such a merger would be the answer to the New England situation, with the three proposed eastern trunklines (PRR-NYC, C&O-B&O, and N&W-NKP) having "equal competitive access to the area."

Discontinuance of five passenger trains is being sought by the Erie-Lackawanna in petitions to the ICC. Trains involved are No. 25 between Port Jervis and Binghamton, N.Y.; No. 26 between Binghamton and Hoboken, N.J.; No. 40 between Elmira, N.Y. and Hoboken; No. 41 between Denville, N.J. and Scranton, Pa.; and No. 43 between Scranton and Elmira.

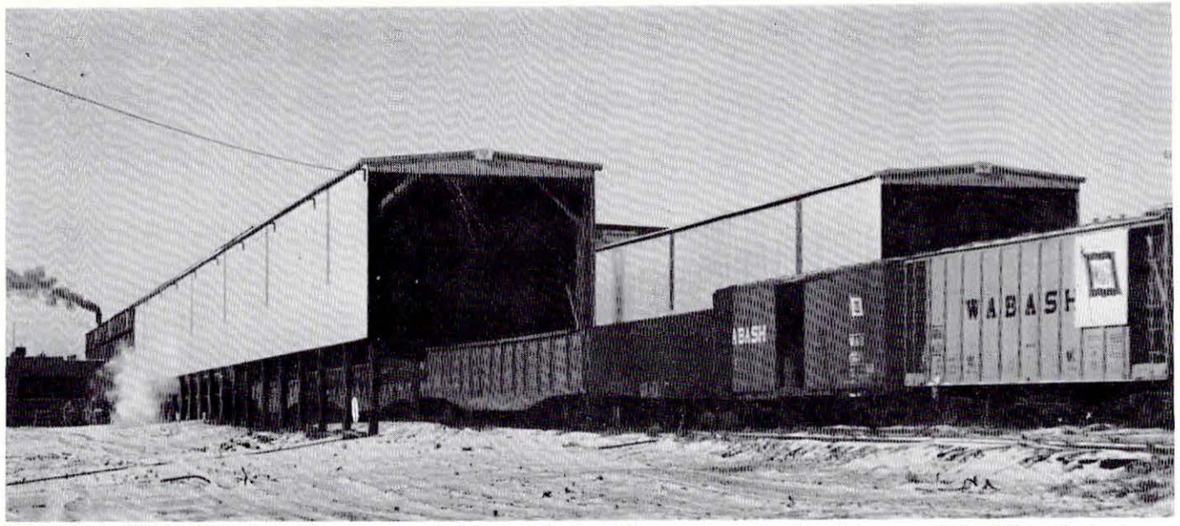
Despite New Haven trustees' protests, Gov. Nelson Rockefeller has signed a bill denying the railroad tax relief on its real property in New York that is used for commuter service. The trustees contended the tax measure would hasten the liquidation of the New Haven's passenger service by imposing "a staggering tax accrual on an already deficit-ridden operation." The railroad has been in default on its taxes for two years.

The CN has introduced its "thriftifare" plan for sleeping car passengers on trains between Winnipeg and northern Manitoba communities, offering savings of up to 40% over former fares. Under the plan, passengers in the sleepers are provided complimentary dining car meals during their trip.

The Kennedy Administration has made 36 grants totalling $6.5 million where transportation planning was involved, according to figures released by Housing Administrator Robert C. Weaver. In addition, two loans totalling $10.5 million were made for transportation facilities.

Railway Age Index

The index to Volume 153, the latest volume of Railway Age, July-December, 1962, is ready for distribution, and copies may be had by those subscribers desiring them. Requests should be addresed to the Circulation Department, Railway Age, Emmett Street, Bristol, Conn. Subscribers who have in previous years made application for the index need not apply again. They will continue to receive it as long as they continue to subscribe.



PAINTING SHELTERS (above), are separated by track for silica-sand cars and paint-reservoir building (below).

Pole-Type Buildings Shelter Car Painting

Wabash sandblasting and painting operations at Decatur, Ill., formerly carried out in the open, are now performed in two structures in which the main supports consist of treated poles.

The Wabash is sandblasting and painting freight cars in two new shelters of pole-type construction at Decatur, Ill. Structures of this type were chosen because the building materials required were readily obtainable, they could be erected by railroad forces, and they were considered economical, easy to maintain, and durable.

The shelters were needed to furnish cover for the sandblasting and painting operations. These operations, formerly done in the open, had to be halted during wet weather. Two mechanics and five helpers do the work, completing the painting of 12 to 14 cars a day, which corresponds to the work of the nearby freight-car-repair shop.

The shelters, 252 feet long by 20 feet wide, were built parallel to each other, 35 feet apart, and about 25 feet east of the car-repair shop. Each shelter is served by a through track, one of which passes through the car-repair shop.

Treated Class 4 poles, 35 feet long, were set in holes drilled 9 feet deep on 14-foot centers in two rows 20 feet apart for each shelter. This pole length permitted an overhead clearance of 23 feet from the top of rail to the bottom of the ridge beams. The outer faces of the poles were made vertical.

● **Steel panel roofs.** Two 3-inch by 12-inch wood ridge beams at the column points support an Armco Steelox-panel roof. Galvanized-iron siding was used along the sides for the upper 16 feet. The areas below this siding were left open. Galvanized fastenings with neoprene washers were used for holding the roofing and siding to the wood. A corrugated plastic sheet was used in each side wall at every third bay to introduce natural light into the interior. Working platforms, 18 inches wide, were constructed on the interior along each side wall, about four feet above rail level. The platforms are supported on brackets fastened to the poles.

After each working day, a switch engine sets out 12 to 14 repaired gondola and box cars. A car puller is used to move the cars forward through the shelters as required by the progress of the work. A Trackmobile or switch engine is used for pulling painted cars out of the sheds and moving them to a track scale, where they are weighed and where the weight is stenciled on them.

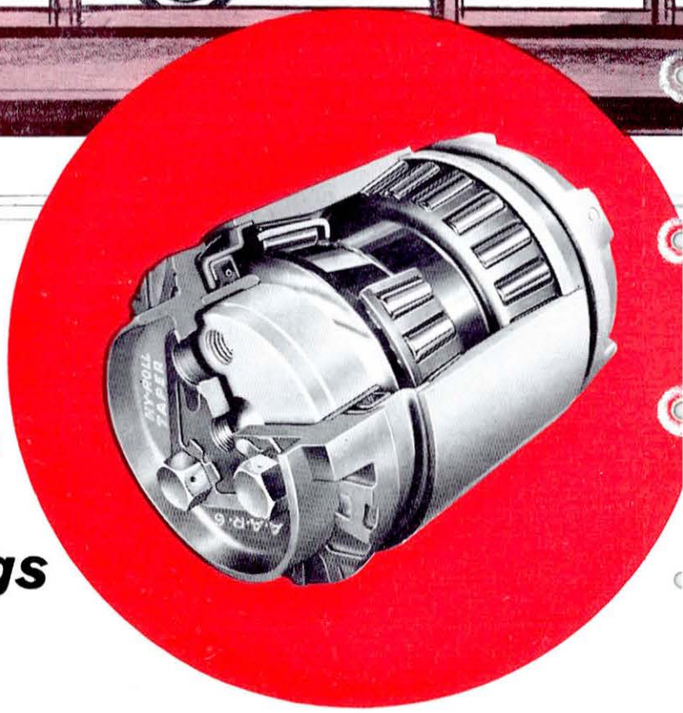
Between the two shelters is a track on which cars of dry silica sand are spotted. Also between the sheds is a small building which houses and keeps warm the paint reservoir of a Grayco spray outfit.

Two portable sandblasting machines, one for each shed and each with two lines of hose 60 feet long, are used. Each machine is connected to an air-supply line. One man in each shelter does the sandblasting. A third man opens and closes the sand-discharge and air-blast valves as required. Canvas is used to cover the journal boxes during the sand blasting.

After sandblasting, the cars are winched forward and a painter-mechanic and a helper spray one coat of paint, from 8 to 10 mils in thickness, on the car sides and box-car roofs. Using an airless spray gun at the end of 75 feet of hose, they paint cars on the tracks in both shelters. Another painter-mechanic and a helper do the stenciling.

FOR FREIGHT SERVICE...

AS RAILROADS TURN TO HYATT taper freight bearings

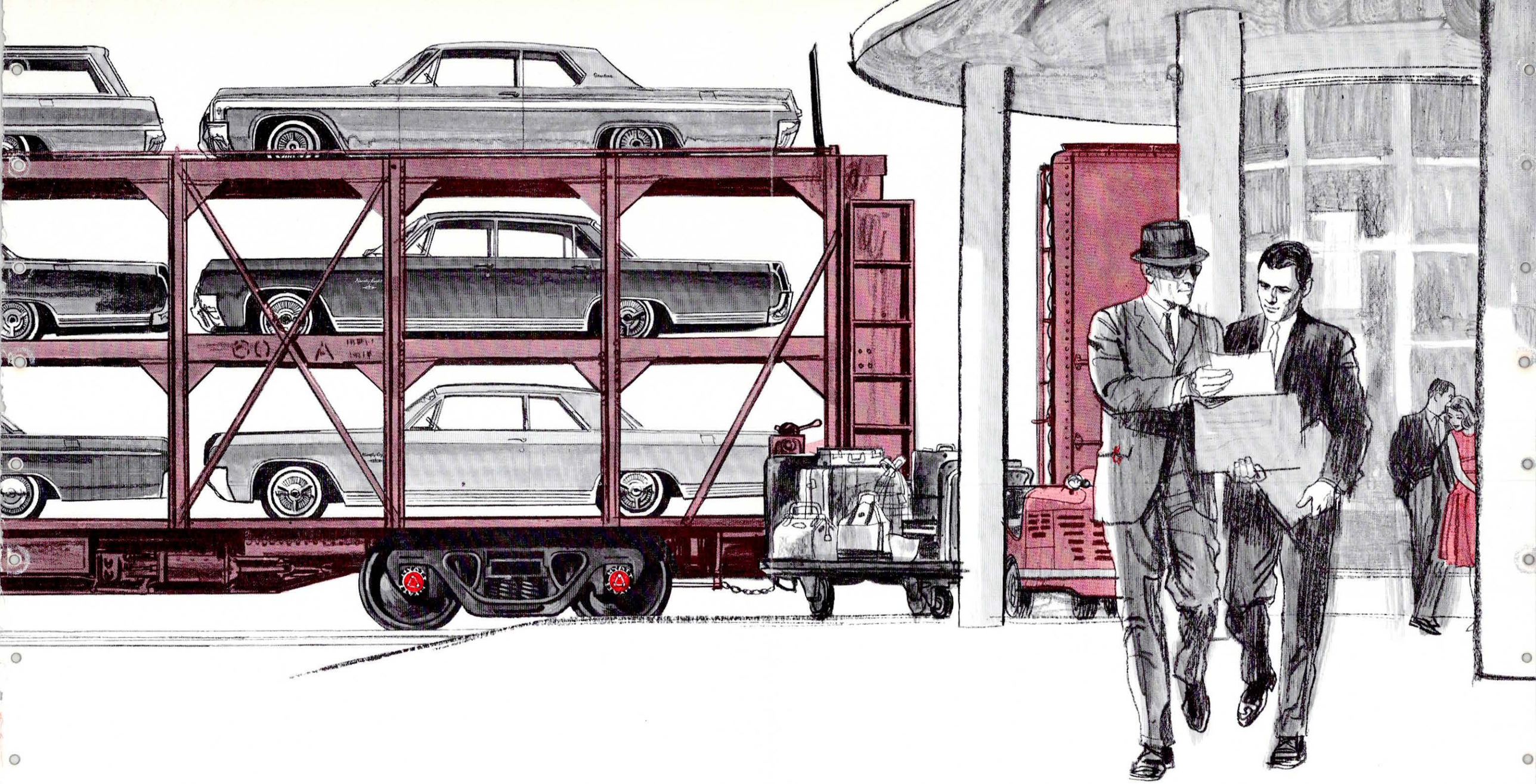


Look—no solid bearings. No unscheduled stops either! When there's a Hyatt taper freight bearing at every wheel, freight service is dependable . . . modern . . . trouble-free and fast. Freight earnings get better and better, day by day.

It doesn't happen overnight.

It happens with each new car order specifying Hyatt taper freight bearings. For as each new Hyatt equipped car goes into service—paring down delays and operating costs—it removes another obstacle on the road to better railroad revenues. Freight car investments are strengthened by strengthening the earning power of each car in the fleet!

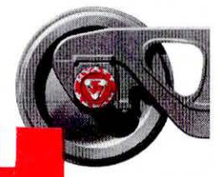
Hyatts pay for themselves in operating economy by virtually eliminating costly maintenance and lubrication, cutting terminal bearing inspection time to a minimum.



FREIGHT EARNINGS GET BETTER... AND BETTER... AND BETTER... AND

They help eliminate delays, reduce damage claims, increase car availability, improve service and promote greater goodwill with your shippers. When the majority of all freight cars roll on anti-friction bearings, our nation's railroads can expand their earning potential.

In view of these facts, every executive concerned with railroad earnings will probably agree that it no longer makes economic sense to invest in otherwise modern freight cars with obsolete solid bearings. Progressive railroaders, who think about tomorrow and tomorrow's profits, should specify Hyatt taper freight bearings for all new car orders.



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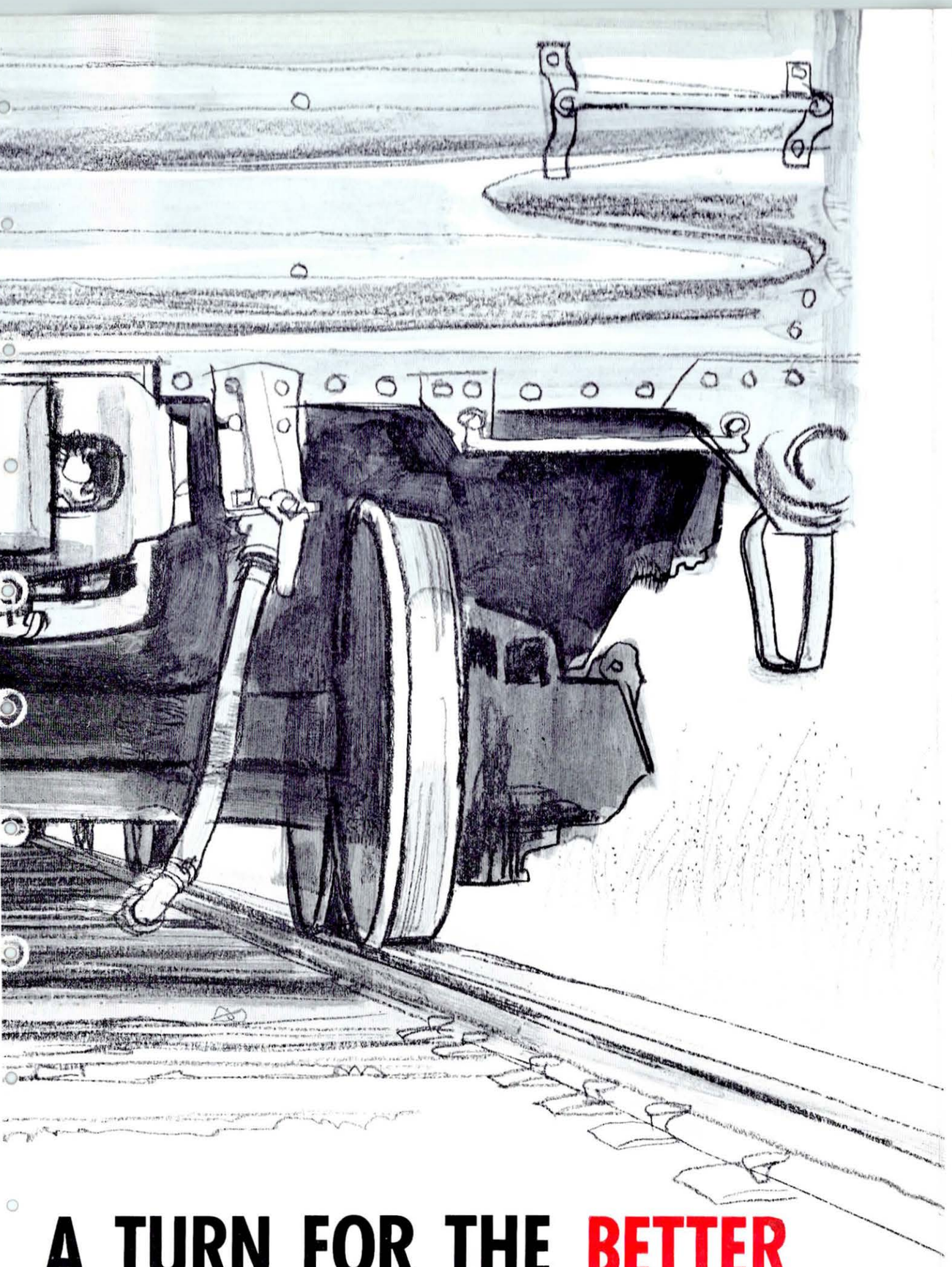

A TURN FOR THE BETTER

Wheels and Axles: Problems, Solutions

International experts gathered recently at Bergamo, Italy, to discuss wheel problems—and solutions. One topic: How computers can be utilized in calculating railway wheel designs.

By R. H. BEETLE

At the recent International Wheel Sets Congress in Bergamo, Italy, the spotlight was on the advancing technology of wheels and axles necessitated by increasing service demands. The 150 representatives from railroads, manufacturers and other interested groups found an active schedule at this first Congress, held April 7-12, with some 23 technical papers and tours of nearby wheel-sets manufacturing facilities. Sponsored by the Italian Metallurgical Association, the Congress had representatives from 15 countries who confirmed its success by making plans for another meeting in Germany during the fall of 1965.

Applications of data processing and computers were shown to be of benefit in the solution of railroad wheel problems. In a paper by Messrs. Biggiero and Costanzo of the Experimental Institute in Rome, the service performance of tires was analyzed with reference to a great variety of quality and service factors through the use of data processing machinery. In another paper, 18 months of mathematical and programming work by Allmanna Svenska Elektriska AB (ASEA) of Sweden developed means of calculating new railroad wheel designs on the digital computer. S. Johnsson of ASEA reported in his paper that a complete calculation of a new wheel shape with this program takes about four hours on their computer. Previously this could only be done by manufacturing different shapes and sizes of wheels which would then be measured for strain and deflection while being subjected to different loadings. Through the use of the computer, ASEA and Surahammars Bruks AB were able to reduce the cost and time required for development of new wheel designs by minimizing the number of experimentally designed wheels to be produced and tested. The ASEA program included stresses and deformations due to the shrinking of tires on centers, the temperature gradients developed by braking and finally both the vertical and lateral forces. Satisfactory agreement of the computer results with actual strain and deformation measurements on wheels has been shown by the Swedish experimental work. Perhaps the greatest limitation of this approach to wheel design is that stresses for calculation purposes have to remain below the yield point.

Laboratory testing of railroad wheels to develop new steels which would meet the growing severity of railroad service was reported by Dr. Brian Hundy of Steel, Peech and Tozer in England. Dr. Hundy utilized a wheel testing machine, designed to simulate railroad braking, for studies of both thermal cracking and tread wear. Economic limitations for railroad wheels were reported by Dr. Hundy to discourage the use of nickel as a means of increasing the resistance of such steels to brittle fracture and thermal cracking. The importance of fine grain size in resisting thermal crack formation and propagation was cited in this paper and later discussions on this subject brought out the importance of a suitable aluminum deoxidation practice to control grain size.

Wheel wear studied

On the subject of wheel wear, both Dr. Gottardi of Italsider and Dr. Hundy agreed in the discussions that coarser steel structures did have better wear characteristics and this had to be balanced against the thermal advantages of finer grain. A few tests were reported by Dr. Hundy on vacuum-cast wheels which indicated that both the wear and thermal characteristics were improved but no reason was offered to explain why vacuum casting produced these benefits. Dr. Hundy concluded that no laboratory test can completely substitute for actual service, but the wheel testing machine is able to simulate service conditions reasonably well with many results directly applicable to practice.

A number of papers dealt with the manufacture and behavior of centers and tires in Italy. One of these by S. Cardona and F. Gottardi, from the Ministry of Transport and Italsider respectively, dealt with the use of ultrasonic inspection for new and used railroad tires. It was brought out in the discussion of this paper that only three railroads in Europe require the ultrasonic test on wheels. Dr. W. Hesse of the Austrian Federal Railways reported over 5 years' experience in using ultrasonic inspection on tires running in service.

A paper presented by F. Birmann of the German Federal Railways covered the influence of flattened tires on railway track. The relationship between profiles, wear and the tensile strength of the rails and tyres was also investigated by Mr. Birmann. Professor E. Martin of Berlin reported the nondestructive testing methods employed to discover various defects in wheel sets.

The development of International Specifications for wheel set components by the U.I.C. was reported by M. Jonquet of the SNCF (French National Railways) while application of these specifications was discussed by M. Salmon of the Syndacat Materiel Roulant. The surface treatment of steel wheels was based on a study by the SNCF, covered by Messrs. Gauthier and Ravenet, that related to both the braking effect and the ratio of the axle load to the wheel diameter. The different methods of pressing wheels on axles was presented by a paper by G. Priolo and M. Santini of Italsider.

The axle portion of the wheel set was dealt with by several papers from England and one from Japan. Dr. H. Nakamura and C. Konishi reported on the strength of car axles for the Railway Technical Institute of the Japanese National Railways. This paper dealt with the measurement of dynamic axle stresses in service and considered the fatigue limits of the wheel seat. Induction hardening was explored to improve the fatigue strength and considerable interest developed in later discussions on the induction hardened axles. The induction hardening is being used on the new Tokaido Line axles to prevent failure at the wheel seat. The Tokaido operation has a 125-mph speed. In the discussion, it was brought out that the induction hardened axles can still have fretting corrosion in the wheel seats, but no cracking resulted due to the compressive stresses that are

(Continued on page 34)

*Mr. Beetle is chief engineer, Southern Wheel Products, Railroad Products Division, American Brake Shoe Co., Mahwah, N.J.

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Let's Get a Bigger Pie

While industrial relations in the 'Anglo-Saxon' countries concentrate on dividing the pie, Europeans are baking a bigger one.

No railroader needs to be reminded that the principal cause of poor railway earnings, and declining employment, is the loss of traffic to other agencies of transportation. Another seldom-considered factor in this unfavorable showing is that national production (hence, traffic available to all modes of transportation) is not enjoying as large a ratio of increase as is occurring in some other countries—notably those in the European Economic Community.

The failure of national production in Britain to increase at as high a rate as that of the European Economic Community has given rise to a lot of soul-searching in that country. A member of Parliament, Aidan Crawley, explored the possible reasons for this disparity in a recent article in the Sunday Times (London). Some of his observations would appear to apply with equal force to the U.S.A. The reason the rate of growth in the Scandinavian countries, and the European Economic Community, is as favorable as it is—he reports—is that in these countries:

"There has been a break-through in industrial relations as dramatic as the conquest of the sound barrier. The old antagonisms between capital and labor—the rigid divisions of 'we' and 'they' which have so often obstructed progress—are disappearing. In their place a system of organized collaboration in the running of a mixed economy is emerging.

"In Sweden workers and employers have over the past thirty years evolved a system of mutual trust and benefit which goes far beyond anything known, certainly in Britain's larger and more complex industry. The key to the Swedish system is not only that the government has power to intervene to prevent strikes, but that both sides meet regularly to decide on how the national economic cake can be expanded and then, and only then, get down to agreeing on how large a slice each vested interest can have. . . .

"The reason we [i.e., in Britain] are falling behind is that we lack a common will to work. The relations between British employers and trade unions are old-fashioned and restrictive. It has taken months and even years to get a simple implement like a fork-lift accepted in the British docks, new diesels introduced on our railways or new buses into the London Transport fleet.

"Dr. Verolme of Rotterdam has created his ship-building business from scratch since the war. He says bluntly that one of the reasons why his company has taken our business [i.e., ship-building in British yards] away from us is that any man in his yards can do any job, and they can therefore build or repair ships much more quickly and cheaply than we can.

"Not only employers but workers are *demanding* new machines. The men in Dr. Verolme's yard boast about how much labor some of their equipment saves. Going around a steel mill in Oberkassel, I was constantly asked by the workmen if British equipment were as good as theirs. In an old-fashioned Dutch printing firm the proprietors *have* to introduce the latest processes or they lose their labor. As a result they can often do work for British publishers at well below British costs.

"Governments in Western Europe have seized the opportunity offered by reconstruction to create a new pattern of industrial relations. Whereas in Britain, industrialists, trade-union leaders and government are still almost unanimous in proclaiming that labor relations are better left to voluntary negotiations between management and trade unions, in every country north of the Pyrenees an extensive code of labor legislation has been introduced since 1945. And in each country the core of this legislation is what is called joint consultation.

"Workers' and employers' representatives are *obliged by law* to get around the table regularly, discuss their problems and take joint decisions.

"Continental workers want to spread wealth as much as their British counterparts, but not at the risk of slowing down its creation. It does not shock them that in Germany even the richest people keep half their income. On the contrary, they believe it is sound economics. The real break-through in industrial relations on the Continent is that men and women at all levels have a sense that they are building a new community in which many of the old economic relationships have ceased to exist. If we are to compete, we have got to cultivate this same sense in Britain."

Smaller Pie, Smaller Slices

Whether industrial relations on the European continent are actually as idyllic as depicted by Mr. Crawley, we do not know. But the results being achieved over there, in increased production and rising standards of living, strongly support what he says.

If U.S. railroads were getting from our unions this kind of far-seeing and intelligent cooperation, the outlook for the industry, and for everyone in it, would improve dramatically. Instead, so far, what we have is George Leighty going around making speeches in favor of the same kind of restrictions on the railroads' right to compete for traffic that are being advocated by the American Trucking Associations. Instead of seeking to increase the size of the pie the railroads have to divide, Mr. Leighty is doing what he can to shrink its dimensions. When are our union chiefs going to assume responsibility and foresight commensurate with the power they enjoy?

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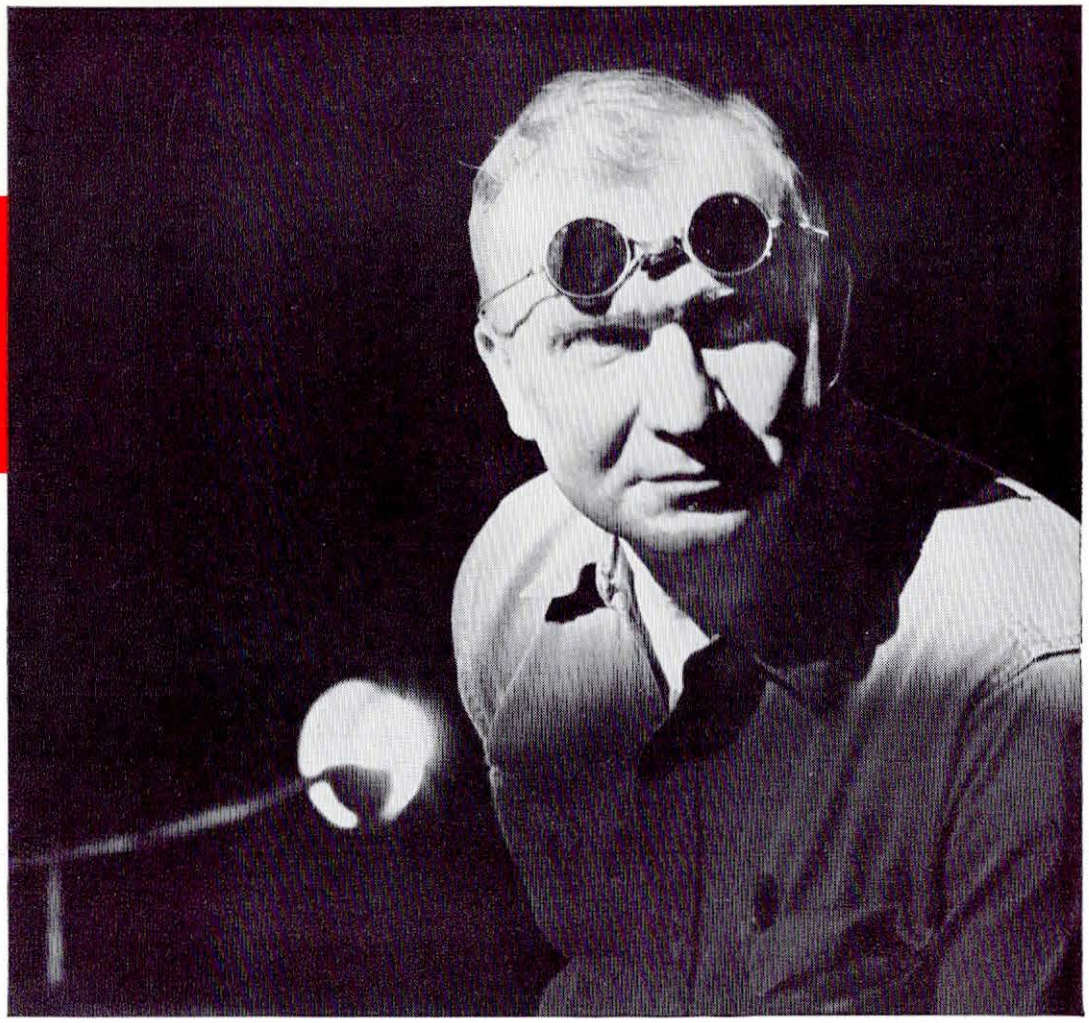

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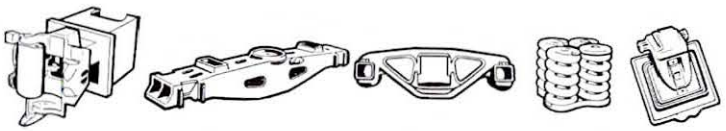

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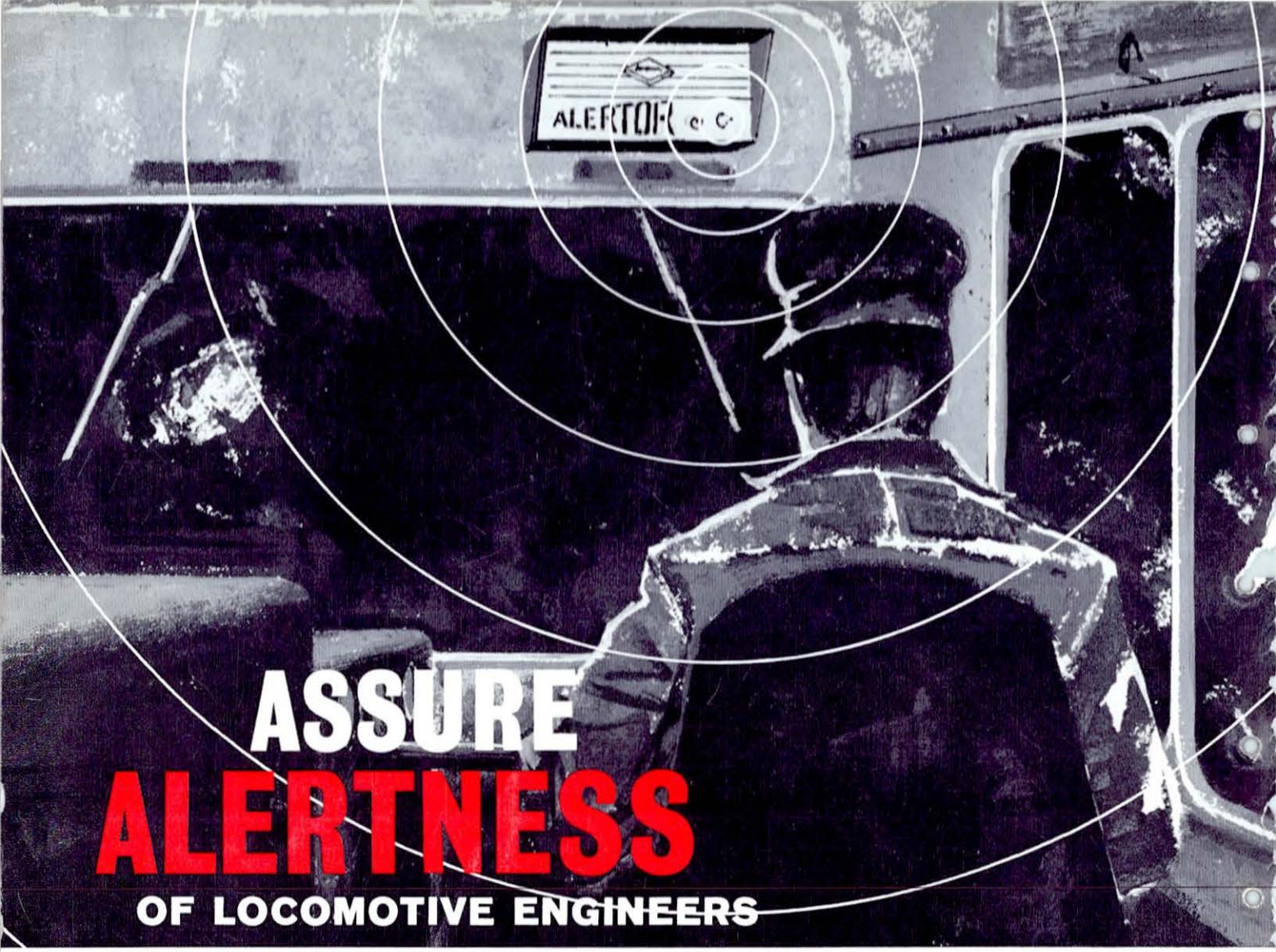

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